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Climate-Resilient Ecosystems and Livelihoods (CREL)
AID-388-A-12-00007

Annual Progress Monitoring Report
October 1, 2015 – September 30, 2016

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Contents

1: Introduction	3
2. Program Progress and Accomplishments.....	4
3.0: CREL Technical Activities	7
4.1 Improved Governance of Natural Resources and Diversity (IR 1)	12
4.2 Enhance Knowledge and Capacity of Stakeholders (IR 2)	23
4.3. Strengthening Planning and Implementation of Climate Resilient NRM and Adaptation (IR 3)	37
4.4 Improved and Diversified Livelihoods that are Environmentally Sustainable and Resilient to Climate Change (IR 4).....	48
4.5 Cross-cutting Activities	52
Gender.....	53
Communications and Outreach.....	57
Grants.....	61
Monitoring and Evaluation.....	64
Environmental Compliance	78
Construction	80
Program Operations	81
Annex A: Progress on Performance Indicators (October 2015 – September 2016)	87
Annex B: Success Stories.....	95
Abbreviations & Acronyms	100

1: Introduction



USAID/Bangladesh awarded Cooperative Agreement AID-388-A-12-00007 to implement the Bangladesh **Climate-Resilient Ecosystems and Livelihoods (CREL)** Project to an experienced consortium of local and international organizations led by Winrock International on September 17, 2012. CREL is a five-year, \$32.6 million project that scales up and adapts successful co-management models that conserve ecosystems, improve governance of natural resources and biodiversity, and increase resilience to climate change through improved planning and diversification of livelihoods that reduces dependency on extraction of natural resources from forests and wetlands. The CREL project's objective is **increased responsiveness and resilience of vulnerable biologically diverse environments to impacts of climate change**.

Through CREL, Winrock and its partners address environmental, socioeconomic and policy issues that threaten biologically sensitive areas in Bangladesh and the people who depend on these areas for their livelihoods by scaling up proven methodologies that promote conservation and improve resilience to climate change. CREL achieves this by increasing capacity of individuals, communities and governments to adapt to and mitigate climate change impacts.

CREL builds on USAID's past investments to strengthen natural resource management (NRM) and livelihoods under the Management of Aquatic Ecosystems through Community Husbandry (MACH) project, the Nishorgo Support Program, and the Integrated Protected Area Co-management (IPAC) project.

CREL has four inter-related components which make up the Intermediate Results (IRs) of the Results Framework:

Component 1: Improved governance of natural resources and biodiversity

Component 2: Enhanced knowledge and capacity of stakeholders

Component 3: Strengthened planning and implementation of climate-resilient NRM and adaptation

Component 4: Improved and diversified livelihoods (i.e., environmentally sustainable and resilient to climate change)

This Annual Progress Report is submitted to USAID by Winrock International in fulfillment of requirements outlined in Section A.5.b.i of the Cooperative Agreement and describes the accomplishments and outputs for the fourth year of the five-year project, from October 1, 2015 to September 30, 2016.

2. Program Progress and Accomplishments

Fiscal Year (FY) 2016 was noteworthy in terms of significant progress on policy, CMO sustainability, CMO capacity and substantially increasing the level of construction activities across all four regions. Much of the progress was the result of resolving the outstanding TPP issues in the previous year. Supporting this progress was a significantly improved communications effort resulting in an expanded CREL presence within USAID, government partners and other interested stakeholders. The successes in FY16 provide a strong foundation for progress and consolidation during the final year of CREL, FY17.

Policy

With three Technical Project Proformas (TPP) from the Departments of Fisheries, Forests, and the Environment in place, CREL was able to make significant progress its policy objectives including the final drafting and submission of four policy revision documents for approval to relevant ministries including the Guidelines for Permanent Wetland Sanctuaries, Guidelines for Wetland Co-management, the Ecologically Critical Area (ECA) Management Rules 2016 and the Protected Area Management Rules 2016 (PA Rules 2016). Implementation of policy was demonstrated by three *Jalmohals* of Hakaluki Haor ECA being turned over to Village Conservation Groups (VCGs) under a Memorandum of Understanding (MoU) between Ministry of Land and Ministry of Environment and Forests. Policy successes have been made possible by initiating considerable high level dialog with and between ministries on policy issues.

CMO Sustainability

Two key events have contributed most to CMO sustainability during FY16: i) development of long-term visions and plans by the CMCs; and ii) high level government awareness and commitment to the importance of CMO sustainability. The long term CMC planning process led by CREL has provided a clear vision for the role of the CMC in conservation activities in PAs consistent with and supportive of the PA Plans CREL has led the development of with the government in the past two years. With the more obvious linkage between PA plans, the CMC long term plans and supportive high level policy maker dialog and field visits supported during the FY, there is an improved awareness of the importance of the CMO structure in the sustainable management of the PAs and, therefore, a growing commitment to ensure the sustainability of CMOs via policy instruments. This same focus on awareness of the importance

CREL Implementing Partners

Bangladesh

Bangladesh Centre for Advanced Studies (BCAS)
Center for Natural Resource Studies (CNRS)
Community Development Centre (CODEC)
Nature Conservation Management (NACOM)

International

Winrock International
WorldFish Center, Bangladesh
TetraTech/ARD

Government of Bangladesh

Ministry of Environment and Forests (MoEF)

- Department of Environment (DoE)
- Forest Department (FD)

Ministry of Fisheries and Livestock (MoFL)

- Department of Fisheries (DoF)

Ministry of Land (MoL)

of co-management of natural resources has been a cornerstone of CRELs' capacity building efforts for government at multiple levels as well as communities. CREL has also supported a number of high level GoB staff to attend international conferences and dialog on natural resources and climate change issues during the year, further socializing the importance of CMO sustainability.

CMO Capacity

CREL has invested considerable time and energy into enhancing CMO capacity as measured by 17 key indicators in five categories which are monitored on a regular basis. Substantial gains have been made as measured by these indicators during this year. A CMO guide has been produced that provides clear guidance for current CMO members and office bearers and, importantly, services as a long term resource for future CMO members and office bearers as it changes. This is further supported by CREL grants (now into a second phase) to CMCs to gain expertise in the planning, financial and managerial competence to responsibly manage and report on resource use that is now also connected to their long term plans. This is further enhanced by training of CMC leaders on resources mobilization and by policy successes on fee sharing arrangements with CMC from PAs.

CREL Achievements at a glance:

In FY 2016, with US Government support, Winrock International and its CREL implementing partners were able to achieve:

Policy:

- Guidelines for Permanent Wetland Sanctuaries have been officially proposed to the Ministry of Land
- Final draft of the Guidelines for Wetland Co-management in Bangladesh has been officially proposed to the Ministry of Land
- Responsibility for the sustainable management of three *Jalmohals* (water bodies) of Hakaluki Haor ECA have been turned over to Village Conservation Groups (VCGs) under a Memorandum of Understanding (MoU) between Ministry of Land and Ministry of Environment and Forests
- The Ecologically Critical Area (ECA) Management Rules 2016 have been adopted by the Government
- The Protected Area Management Rules 2016 (PA Rules 2016) have been submitted to the Finance Division by the Ministry of Environment and Forests as part of the process of adoption to be followed by forwarding of the Rules to the Ministry of Law, Justice and Parliamentary Affairs
- Climate change issues based on PCVA have been included in 8 additional Union Development Plans bringing the total adoption to 30 Union Parishads

Capacity Building

- 80 CMOs/CBOs further strengthened in co-management of natural resources
- 54 CMOs/CBOs and 26 VCGs with Annual Development Plans (ADPs)
- Regional dialogues with the private sector in Chittagong and Khulna region to explore financial support

- National dialogue on financial sustainability of CMOs at Cox's Bazar on 23 March 2016
- 15 CMOs demonstrated accountability and transparency in open-days
- A study visit program to Thailand on co-management for 12 GoB officials in July 2016
- The Bangladesh Public Administration Training Center (BPATC) incorporated curricula on co-management and NRM into existing training courses, which will reach a large number of professional government officials
- CREL and FIVDB in its fourth phase of the Financial Entrepreneurial Literacy Program trained 2100 VCF members through 105 FELCs. Trained VCF members gained new skills and reduced dependency on natural resources.
- At the regional level 944 CMO (336 women) members received training on climate change adaptation and climate resilient NRM
- 26 DOF officials trained on climate-resilient wetland and fisheries management

Climate Resilient NRM

- 5 forest PA management plans were approved by the government (Himchari National Park, Chunati Wildlife Sanctuary, Khadimnagar National Park, Fashiakhali Wildlife Sanctuary and Dudpukuria-Dopachari Wildlife Sanctuary)
- 9 more forest PA management plans were drafted, 5 of which sent to the Ministry of Environment and Forest (MoEF) for approval
- 20 Co-Management Committee (CMC) long-term plans were developed
- 8 wetland community organization long term plans and 2 wetland management plans were developed
- 443 village level climate change adaptation plans were developed through participation of 7,886 women and 6,654 men
- Improved Cook Stoves were adopted by 1064 households in PA landscapes
- Collected 10,503 turtle eggs and safely released 9,100 hatchlings into the sea

Improved and Diversified Livelihoods

- 51,227 people with increased income of 1.73 Million USD during project Year 4
- 9,493 farmers were trained on Climate Resilient Agriculture
- 1.39 Million USD leveraged from private sector, other donor funded project, partners and Government of Bangladesh.
- 2,100 women engaged in Financial Entrepreneurship Literacy Training in 105 centers

Gender

- Refresher workshop for 135 staff on CREL gender strategy
- Quarterly gender meetings in 25 sites for promoting gender equity in CMOs
- 5 MOU's signed with local NGOs for leveraging support on gender issues
- Strengthen gender components for all ADPs and Long Term Plans
- Gender orientation for 610 new women CMO office bearers in 23 sites

Communications and Outreach

- Raise awareness of policy reforms through meetings arranged between CCF and journalists; media campaign for International Day of Forests; 20 forest department community events on forest awareness; coordinate national dialog on sustainable financing for co-management organizations; coordinate policy maker workshop on NRM and Environmental Law; and arranging high visibility handover of CREL construction by government and USAID to communities.

- Supported CMO fundraising through support for 16 CMC Facebook pages; development of two high quality videos; supported 4 youth-focused jungle walks.
- Develop signs and interpretive materials including 65 signs on climate smart agriculture; collaborate with USAID and US DOI on production of 209 signs for PAs; installation of 16 signs on ECA awareness and 16 signs installed on sanctuary information.
- Development of brochures and leaflets on ecotourism; wall and desk calendars; wrote and disseminated 52 success stories; collaborate on over 300 news stories on CREL activities; provided weekly CREL briefs to USAID; helped GoB observe major international and national conservation-related days

Grants

- Finalized 29 first round grants to CMCs
- Issued 46 new 2nd round grants worth \$154,381
- Issued one more JDR grant

M&E Activities

- High resolution maps for all 28 project sites
- Detailed survey of Chunati WS with Good Earth
- GIS orientation and capacity building
- Supported bird surveys as part of Asian Waterbird Census
- Maintained and oriented staff to CreLink

Environment

- Streamlined environmental approval processes with updated EMMP
- Completed environmental documentation for 93 sites

Construction

- 121 construction activities initiated and 70 completed
- Priority construction activities submitted for 318 new activities and prioritizing underway

3.0: CREL Technical Activities



Climate Lens in CREL: CREL assesses resilience and adaptation capacities in different ecosystems and social systems around the landscape zones of the forest PAs in four regions. Vulnerability analysis and adaptation planning at village and larger levels (administrative units or local ecosystem management units) were applied to understand the risk, vulnerability, adaptive capacity/resilience, lack of resilience and adaptation needs and priorities of the community and actors in both forest and wetland ecosystems. The level of resilience in forest ecosystems was found to be comparatively better in the Northeast (Sylhet) region while resilience of the forest and wetlands is compromised in the Southwest by increases in the incidence of multiple climate hazards (salinity, cyclones, high tide, water logging, heavy rainfall and landslides) and increasing climate variability (temperature, drought, cold wave and erratic rainfall). The state and level of resilience of wetland basin ecosystems (*haors*) in the Northeast region is also challenged due to temperature fluctuations (heat stress and cold waves), erratic and decreasing rainfall, and drier dry seasons/pre-monsoon.

Progress in work: CREL recognizes that there are close linkages between Natural Resources (NR), livelihoods and climate change. Climate factors are affecting the resources bases, their productivity and ecosystem services as well as how the declining resilience is again affecting the lives, livelihoods and wellbeing of the people living around the ecosystems. CREL identified current climate change hazards, past trends, and projected future climate trends and impacts; associated risks and vulnerabilities in major livelihoods areas and ecosystems; and identified current coping, adaptation, disaster risk reduction and climate resilient livelihood options and priorities, particularly for vulnerable communities. The role and responsibilities of various key stakeholders have been identified and proposed in the local adaptation plans. Linkages between the communities, local government and sectoral development agencies are being explored to better support adaptation, disaster risk reduction, climate resilient NRM and livelihood options and strategies. Local perspectives and community needs and are being integrated into the PA and wetland co-management plans. Social mobilization and strengthening of co-management occurs via CMOs and through the inclusion of CMO representatives in relevant bodies formed by Union Parishads (UPs). Awareness on climate change impacts, vulnerability and adaptation, NRM and even mitigation has been built through capacity building efforts, communication and campaigns at local and regional levels.

Approach, Methods and Tools: CREL captures a wide scope of environmental, climate, social and livelihoods issues by employing a multi-dimensional and participatory approach to tracking down the progress of activities and outcomes in relation to resilience in NRM and livelihoods.

CREL develops three, mutually supporting forms of resilience in the communities it assists:

- **Ecosystem resilience:** strengthening co-management, planning and climate-resilient NRM, and restoring biophysical conditions and health to ecosystems.
- **Social resilience:** increased institutional capacity to adapt to Climate Change (CC), broadened stakeholder participation in planning and co-management processes, more equitable governance.
- **Economic resilience:** diversified and climate resilient livelihoods that are sustainable and less dependent on extraction of natural resources.



We assess the process of planning and implementation, and monitor the outcomes and results, with quantitative and qualitative indicators. While doing this, CREL examines the relevance, effectiveness and efficacy of its actions and the outcomes in a systematic way. The Participatory Monitoring and Evaluation Plan (PMEP) has been developed for measuring the progress and outcomes. The PMEP documents the level of awareness of community members and other actors about climate change impacts, risks and vulnerability; knowledge about future risks and vulnerability to climate variability and extremes in the locality and regions; and knowledge and practices of current coping and adaptation particularly for agricultural practices and NRM. The local planning processes supported by CREL have assisted co-management stakeholders plan how to cope, adapt and implement NRM with greater resilience in respect to human, social and natural systems.

CREL promotes Climate Resilience through:

Policy and Guidelines (IR 1)

- Incorporating appropriate CC adaptation and resilience themes into most of our 13 policy reform targets.
- Taking climate change into account in the development of the proposed Protected Areas (Co-management) Rules, 2016.
- Drafting guidelines on sustainable management of wetlands.
- Handing over wetland leases from MoL to DoF to local communities for sustainable use and associated livelihoods cognizant of resilience and restoration objectives.
- Establishing additional protected forests, wetland sanctuaries and proposed designation of Ramsar sites.

Awareness and Training (IRs 1 and 2),

- Training CMOs and government on current and likely future climate scenarios and potential adaptation and mitigation measures.
- Developing university-level curriculum on climate change, reducing emissions from deforestation and degradation (REDD+) and sound ecosystem management for adoption by at least five universities in Bangladesh.
- Incorporating climate change awareness as a component of other training and capacity building efforts more broadly.
- Strengthening awareness at community and PA/wetland levels on climate change adaptation, mitigation and sustainable NRM.

Assessments and Surveys (All IRs)

- Undertaking PCVA with local communities.
- Mapping of climate change vulnerabilities and priority actions based on PCVAs.
- Undertake carbon inventories and REDD+ baselines to measure current and potential carbon sequestration.
- Monitoring birds and fish as indicators of ecosystem health, revealing trends in abundance and diversity of birds (indicator species) and fish catches.

Planning and Collaboration (IRs 1 and 2)

- Facilitating 600 village adaptation and mitigation plans based on PCVA.
- Assisting CMOs to compile plans to address their priorities for resilience (e.g. reforestation, slope stabilization, wetland re-excavation, flood mitigation measures, raising of roads and ensuring better drainage).
- Supporting government and CMOs in forest and wetland sites to incorporate adapting to future climate conditions into their Forest Protected Area Management Plans (14) and CMO Long-term Plans (26) for forests, and Wetland Management Plans (2) and Community Organization Long-term plans (17) for wetlands that incorporate climate change planning and adaptive management.
- Building capacity (training and small grants) of CMOs to adapt to future climate conditions by implementing planned adaptation activities incorporated in their Annual Development Plans (ADPs).
- Developing CMO plans that include the excavation of canals and raising bunds to retain water and protect wetlands in the dry season.
- Supporting the incorporation of climate change into relevant Upazilla (sub-district) Annual Development Plans and budgets.
- Creating stronger linkages between CMOs and diverse support agencies including government, NGO and private sector agencies which will continue to provide appropriate technology and other support on a long term basis.

Biophysical Improvements (IR 3)

- Supporting afforestation efforts for mangrove forest areas, especially along and outside embankments in coastal areas where forest/ground cover has been lost due to increased erosion.
- Supporting afforestation of fresh water swamp areas to restore and improve the biophysical conditions of wetlands.



Photo 1: Seed sowing involving students, community people, and the Divisional Forest Officer in Cox's Bazar

- Implementing biophysical improvements in wetlands, specifically the deepening of areas and submersible embankments to create better water retention in the dry season, resulting in longer periods for successful aquatic animal reproduction and growth.
- Protecting wetland ecosystems as local sanctuaries.
- Support afforestation via tree nurseries and tree plantations in community areas and institutions.
- Encourage agroforestry in farmland and homestead areas.
- Support Assisted Natural Regeneration (ANR) in forest lands via guarding efforts.

Technology and Livelihoods (IR 4)

- Redirecting livelihoods from dependency on natural resource extraction to more environmentally sustainable revenue generating activities.
- Promoting non-agricultural income opportunities.
- Introducing technology and practices which are more resilient to climate variability, trends and extreme weather events.
- The introduction and dissemination of saline tolerant rice varieties for areas where increasing salinity has reduced farmers' capacity to grow rice using other varieties that have worked in the past.
- Introducing technologies that are more adapted to and reduce risk from more erratic and frequent flooding such as raised beds for vegetable production and constructing towers and other vertical structures for vegetable cultivation that are not as susceptible to flood damage.
- Promoting duck rearing for areas that are increasingly more prone to flooding.
- Adopting fish species for aquaculture that are tolerant of changing salinity, such as tilapia.

Gender-Sensitive Programming

- Applying a gender-based approach to ensure greater participation of women co-management with a focus on general membership, executive or office-holder positions in PFs and VCFs.
- Focusing climate resilient livelihood activities with a greater emphasis on women including climate smart agriculture and Financial Entrepreneurship and Literacy Centers (FELCs) all focused on alternative and climate resilient livelihoods.
- Targeting economic empowerment alternatives for women such as tailoring, cap making, and Pebble buyback handicraft training.
- Ensuring gender mainstreaming in NRM, Climate-Change Adaptation and partner staff training activities.
- Assisting CMOs to develop Gender Action Plans to reduce gender inequality and gender-based violence.
- Conducting a baseline survey using a Gender Scorecard in PY3 with FELCs that was established in September 2014.
- Promoting improved cook stoves to reduce carbon emissions and provide for healthier household environments.

4. Program Progress and Key Achievements

The following section describes technical activities completed in Year 4. The status and key issues relevant to CREL and critical to the successful implementation of proposed component activities are summarized for each Intermediate Result (IR). CREL has four associated and inter-related IRs. Under each IR are Sub-Intermediate Results (SIRs) with associated indicators.

The following sub-sections present activities for each IR, integrated with respective indicators, sub-indicators and Year 4 targets and results. While each IR is distinct, they are also closely interrelated and Year 4 activities in one IR may also reference the activities in another IR. In addition to the four IRs, activities related to grants, gender, monitoring and evaluation (M&E), and communications are also outlined and explained. **Annex A: Schedule of M&E Targets** and results at the end of Year 4.

4.1 Improved Governance of Natural Resources and Diversity (IR 1)

Over Year 4, CREL worked with the Government of Bangladesh (GoB) and CMOs to build their capacity in climate change resilience and successful, sustainable co-management in the targeted landscapes. CREL increased support for co-management, focusing on thirteen (13) key areas/issues for policy reforms. This included targeted advocacy to increase GoB buy-in or ownership of co-management principles and approaches, as well as strengthening good governance practices and capacities of CMOs.

Co-management is taking hold in Bangladesh, but progress has been uneven. Differences in CMO effectiveness and sustainability tend to depend on specific locations, types of ecosystems, and the institutions or government agencies involved. Difficulties are greatest in locations where community-based rights and responsibilities are uncertain, particularly due to limited access to revenues or finances to support CMO activities.

Co-management has the support of some, but not all, key government agencies. For example, in 2012 the MoL did not extend reserved rights over water bodies for Resource Management Organizations (RMOs) that had been established under past USG support (Management of Aquatic Ecosystems through Community Husbandry (MACH) Project). Even with consistent advocacy from CREL and support from the Ministry of Fisheries and Livestock over the past three years, user rights over waterbodies have only been secured for some RMOs. This highlights the need for stronger, inter-ministerial buy-in to the principles and practice of co-management. This is also true for revenue sharing and strengthening CMOs in the forest PAs where stronger legal frameworks have been advocated in the past and GoB buy-in to co-management in terms of application of older Government Orders, management rights to NRM and scope to secure funding have been limited. CMOs require both an enabling policy environment (including rules and guidelines) and targeted capacity strengthening, as undertaken in the year 4 Work Plan IR 2, Activities 2.3, 2.4, 2.5, and 2.10.

In Year 1, 14 priority themes/issues for policy reform were identified and agreed upon. In Year 4, a major effort was made to build on this groundwork to achieve lasting policy changes to strengthen co-management for fisheries, wetlands, and forests. It has always been recognized that while the CREL project can support and influence policy, ultimately, GoB adoption of policy change lies outside of the direct control of the project. Consultations and dialogues have been facilitated to enable civil society voices in co-management to be heard as part of the policy decision process. Government agencies are encouraged to make such dialogues and consultations with civil society a regular practice to guide the evolution of appropriate policies and their implementation.

Key Accomplishments

Steady progress has been made on policy reform with targets largely being met. In Year 4, strengthened CREL efforts resulted in the following outputs:

- Guidelines for Permanent Wetland Sanctuaries have been officially proposed to the Ministry of Land
- Final draft of the Guidelines for Wetland Co-management in Bangladesh have been officially proposed to the Ministry of Land
- Responsibility for the sustainable management of three *Jalmohals* (water bodies) of Hakaluki Haor ECA have been turned over to Village Conservation Groups (VCGs) under a Memorandum of Understanding (MoU) between Ministry of Land and Ministry of Environment and Forests
- The Ecologically Critical Area (ECA) Management Rules 2016 have been adopted by the Government
- The Protected Area Management Rules 2016 (PA Rules 2016) have been submitted to the Finance Division by the Ministry of Environment and Forests as part of the process of adoption to be followed by forwarding of the Rules to the Ministry of Law, Justice and Parliamentary Affairs
- Climate change issues based on PCVA have been included in 8 additional Union Development Plans bringing the total adoption to 30 Union Parishads

Table 1: Status of policy focal areas, lead government agency and current status, based on six different stages: analysis, drafted, submitted, officially proposed, adopted, and implementation.

Sl.	Cat	N/Sn	Policy Focus	Lead agency	Steps					
					Analyzed	Drafted	Submitted	Officially proposed	Adopted	Implemented
P1	SL	N	Revision of wetland leasing policy 2009	MoL	Year 1	Year 3	Year 3	Year 3	Year 4 now Year 5	Year 4 now Year 5
P2	SL	N	Guidelines for permanent wetland sanctuaries	MoL, MoFL	Year 2	Year 3	Year 3	Year 4	Year 4 now Year 5	Year 3 now Year 5
P3	A	N	Guidelines for wetland co-management	MoL, MoFL	Year 3	Year 3	Year 4	Year 4	Year 4 now Year 5	Year 5
P4	SL	Sn	Additional permanent wetland sanctuaries	MoL	Year 2	Year 2	Year 2	Year 2	Year 3 3 handed over	Year 4 now Year 5
P5	A	N	ECA policy/rules on co-management for NRM*	DoE	Year 2	Year 3	Year 3	Year 4	Year 4	Not shown now Year 5
P6	A	N	Improved revenue sharing for forest PAs	FD	Year 2	Year 3	Year 3	Year 3	Year 3 now Year 5	Year 3 now Year 5

Sl.	Cat	N/Sn	Policy Focus	Lead agency	Steps					
					Analyzed	Drafted	Submitted	Officially proposed	Adopted	Implemented
P7	A	Sn	Declaration of new forest PAs	FD	Year 2	Year 3	Year 3	Year 3	Year 3	Year 4, Y5 now Year 4
P8	A	N	Revised CMC structure in forest PAs	FD	Year 2	Year 3	Year 3	Year 3	Year 5 now Year 5	Year 5
P9	X	Sn	CMO representation in Union Parishad (UP) Standing Committees	UP	Year 2	Year 2	Year 2	Year 2	Year 2	Year 2
P10	SL	N	Forest PA Rules	FD	Year 2	Year 3	Year 3	Year 3	Year 3 now Year 5	Year 4 Now Year 5
P11	A	Sn	Non-Timber Forest Product (NTFP) revenue sharing in Sundarbans	FD	Year 2	Year 3	Year 3	Year 3	Year 3 now Year 5	Year 4 Now Year 5
P12	A	Sn	Climate change inclusion in Union Development Plans	UP	Year 3	Year 3	Year 3	Year 3	Year 3	Year 4
P13	SL	Sn	Designation of Ramsar sites and/or ECAs	MoEF	Year 3	Year 3 now Year 4	Year 4 now Year 5	Year 4 now Year 5	Year 5	Year 5
P14 *	SL	N	Legal instrument formalizing fish sanctuaries and their co-management**	MoFL	Year 2 now Year 4	Year 2 now Year 4	Year 3 now Year 4	Year 3 now Year 4		Dropped as a Policy Objective of CREL

* Dependent on Department of Fisheries legislative work which did not progress as expected

Key Indicator	Year 4 Target	Year 4 Result
Number of laws, policies, agreements, or regulations addressing climate change (mitigation or adaptation) and/or biodiversity conservation officially proposed, adopted or implemented as a result of USG assistance	5	4 Completed (P2, P3 are officially proposed, P5 is adopted and P12 is implemented)

Sub IR 1.1 Strengthened Legal and Policy Framework for Co-Management

Activity 1.1 Wetland Policy and Legal Reform Strengthening

In Year 4, CREL staff continued to advocate for a number of important wetland policy reforms that emphasized effective and inclusive co-management for sustainable sanctuaries, fisheries, wetlands, and biodiversity. Strategic support was sought from legal experts and former senior bureaucrats to secure passage and approval for multiple reforms to the wetland policy and guidelines discussed below.

Wetland Leasing and Management Policy of 2009

The Wetland Leasing and Management Policy of 2009 is a target for CREL because revisions are needed to ensure sustainable fisheries and fair access for fishers based on community organizations within a co-management framework. Amendments in the existing policy has been drafted by CREL through a Multi-Stakeholder Working Group, where government and non-government stakeholders have provided valuable inputs. CREL submitted the draft to DoF for review during Year 3. After receiving DoF feedback, the draft policy was revised by the Multi-Stakeholder Working Group and officially proposed to the Ministry of Land in February for adoption. Currently CREL is pursuing MoL for organizing a multi-stakeholder National Workshop for review before adoption.

Current status: The policy is at the Ministry of Land for multi-stakeholder review and vetting through a National Workshop scheduled for December 2016.

Wetland Co-Management Guidelines for Bangladesh

The Guidelines for Wetlands co-management was drafted by CREL during Year 3 in coordination with Department of Fisheries and District and Upazila level stakeholders. The draft was shared with relevant departments who are engaged in wetland management for their inputs. The final draft of the Guidelines was officially submitted to the Ministry of Land on August 2016. The Ministry of Land has committed to conduct a national level review workshop in January 2017 to facilitate the final adoption.

Current status: The Guidelines on Wetland Co-Management is at the Ministry of Land for multi-stakeholder review in a National Workshop scheduled for January 2017.

Guidelines for the Establishment and Management of Permanent Wetland Sanctuaries

The Guidelines for the Establishment and Management of Permanent Wetland Sanctuaries has been developed through stakeholder consultations facilitated by an experienced national expert working for CREL. The draft Guidelines were reviewed by the Department of Fisheries and officially proposed to the Ministry of Land in August 2016.

Current status: The Guidelines for the Establishment and Management of Permanent Wetland Sanctuaries is at the Ministry of Land for multi-stakeholder review and endorsement in National Workshop scheduled for January 2017.

Protection and Conservation of Fish Act of 1950 and Conservation of Fish Regulations of 1985

Initially, the Department of Fisheries prioritized the existing Protection and Conservation of Fish Act (1950) and related Protection and Conservation of Fish Regulations (1985) for amendments. It was therefore included as a CREL policy target with follow up meetings with DoF for initiating the amendment drafting process. Because the Department of Fisheries TPP for CREL ended on September 2016 there is limited scope to carry forward this policy target. As a result, CREL has proposed to drop this particular policy target (P14).

Current status: This policy target has been dropped due to delay in decisions by the Department of Fisheries to move forward with the amendment before the end of the project TPP.

Year 4 Deliverables	Status
Wetland Leasing and Management Policy 2009 amendments prepared and submitted	<u>Completed</u> : Wetland Leasing Policy officially proposed
Guidelines for wetland co-management prepared	<u>Completed</u> : Wetland Co-Management Guidelines officially proposed
Permanent Sanctuary guidelines drafted, submitted and endorsed by MoL and MoFL	<u>Completed</u> : Sanctuary Guidelines officially proposed
Revised fisheries legislation formalizing fish sanctuaries and fisheries co-management drafted by DoF	<u>Dropped</u> : Fish Act, 1950 has been dropped from policy target

Activity 1.2 Forest Policy and Legal Reform Strengthening

Protected Area Management Rules of 2016

The PA Rules cover all forest PA-related policies targeted in CREL, including revenue sharing which is central to resource mobilization and sustainability. The approval of these rules is an important milestone for sustainability of Community Management Organizations in forest Protected Areas. In Year 3, CREL prepared a draft of the Protected Area Management Rules 2016 in collaboration with the FD and facilitated reviews of drafts with communities and GoB stakeholders at the national and regional levels.

In Year 4, CREL and the Forest Department organized meetings to review the final draft, after which it was officially proposed to the MoEF. Two inter-ministerial meetings were held in May 2016 to review the draft at the MoEF after which the MoEF sent the reviewed version to the Ministry of Finance along with other supporting documents and examples of revenue sharing for a ministerial decision for securing government financial allocation for CMOs, at source entry fee sharing and clarifying financial provisions for co-management. In Q4, the draft

Protected Area Management Rules 2016 were discussed in an intensive ministerial workshop during August 2016 where the draft Rules were presented by the Chief Conservator Forests in the presence of the following officials: Secretary, Ministry of Law, Justice and Parliamentary Affairs (MoLJPA); Secretary, Ministry of Environment and Forests; Additional Secretary, Ministry of Finance; and other high officials from the relevant ministries and departments. At that ministerial workshop the Secretary, MoLJPA clarified the preliminary questions on revenue sharing and financial allocation for co-management. Site visits and community exchanges were also organized in Year 4 with the Forest Department and community leaders to create visibility of CMO's progress.



Photo 2: Law Secretary sharing impression on co-management with local communities.

Current status: The Protected Area Management Rules 2016 are at the Ministry of Finance for review. Following this review to be completed in 2016, the draft rules will be sent to the Ministry of Law, Justice and Parliamentary Affairs for vetting and then approval by the MoEF.

Sustainable Financing of Co-management and Revenue Sharing

Sharing of 50% of Protected Area entry fees with CMCs is mandated by a government administrative order, but implementation is uneven and procedures for CMCs obtaining these funds are cumbersome and obtuse. The entry fee sharing order lacks legal status and there is still ambiguity for fund sharing processes. In Year 3, the CMCs submitted formal requests to the FD requesting immediate action on implementing revenue sharing agreements with little effect. On March 2016 at the celebration of Co-management Day a dialogue was organized on sustainable financing of co-management, where participants from the government, private sector, development partners and community identified the financial sources needed for sustainable co-management.

The recommendations on financing of co-management from this dialogue were incorporated in the draft Protected Area Management Rules 2016 which were then submitted to the Ministry of Finance for review in September. The current draft of the Protected Area Management Rules 2016 provides clarity on the issues of revenue sharing and legal obligations of the GoB. At the same time, the finalization of the ECA Rules (discussed below) provide similar clarity.



Photo 3: Community Patrol Group leader sharing lessons and demands of the Forest CPGs under PA Rules in Himchari, Cox's Bazar

Current status: The Protected Area Management Rules 2016 incorporated clarity on the following financial provisions: i) Entry fee sharing at source, ii) National budgetary allocation for co-management, and iii) Revenue sharing from non-timber forest product (NTFP) in Sundarbans. The Protected Area Management Rules, 2016 is at Ministry of Finance for review.

Activity Year 4 Deliverable	Status
Protected Area rules approved	<u>In progress</u> : The Protected Area Management Rules 2016 is at Ministry of Finance for review

Activity 1.3 Ecological Critical Areas Policy and Legal Reform Strengthening

In preceding years, CREL supported DoE's efforts to have revised ECA Rules approved by MoEF. The drafts incorporate greater understanding of and provisions for co-management. CREL's CMO assessment results provided insights into what adjustments may be required, particularly in terms of composition and functions for inclusive pro-poor decision-making and planning, access to service delivery, and natural resources and conservation training. CREL worked with DoE to adjust existing ECA committees and their functions so that they embraced

co-management and empowered the VCGs and other stakeholders with clear ECA roles. This as well as other issues have been incorporated into the draft of the ECA Rules.

During Year 4, CREL ensured that the issue of co-management was center in the debate over the proposed Ecologically Critical Area Management Rules (2016). CREL held strategic working sessions and workshops for policymakers and top legislative and administrative officials to gain their support and raise awareness on important Rule changes being proposed. The first workshop on PA Rules and ECA Rules held at Cox's Bazar in August 4-6, 2016. After the workshop a follow up meeting was held at Dhaka with Secretary, MoL on August 10, 2016 on ECA Rules, where it was decided to hold an additional working session on August 24-27 at Cox's Bazar to finalize the adoption process for the ECA Rules. As a result, on September 25, 2016 the Ecologically Critical Area Management Rules 2016 were adopted by the government and circulated through Bangladesh Gazette. The approved ECA Rules create the provision for an ECA Fund at central level for the financial sustainability of ECA committees.



Photo 4: Law Secretary visits Olive Ridley Turtle Hatchery in Himchari ECA.

Current status: Ecologically Critical Area Management Rules, 2016 formally adopted and Gazetted by MoEF for immediate implementation.

In addition to the policy process, CREL worked with local administrations to achieve stronger practical co-management in four ECAs (Hakaluki Haor, Cox's Bazar-Teknaf peninsula, Sonadia and St. Martin's Island) that are physically separated from any co-managed forest PAs. CREL facilitated coordination at district/regional level between the three concerned agencies (FD, DoE, and DoF) and the communities represented in co-management where multiple co-managed sites overlap with or are adjacent to an ECA. CREL facilitated the four CMCs associated with Sundarbans Reserved Forest to promote good environmentally sustainable land and water use practices consistent with ECA status in their target landscape areas (all of which fall within the Sundarbans ECA) through their multi-year plans and awareness and communication activities.

Activity Year 4 Deliverable	Status
Functioning co-management in ECAs (Hakaluki Haor, Sonadia, St Martin's Island and those parts of Sundarbans ECA covered by the 4 CMCs)	<u>Completed</u> : ECA Rules Adopted
Actions to enable approved ECA Rules that embody co-management;	<u>In progress</u> : Reform ECA committees as per Rules
Coordination between co-management of ECAs and forest PAs facilitated at District/region level where initiatives are overlapping (Cox's Bazar-Teknaf peninsula and Sundarbans).	

Activity 1.4 Institutional Change and Actions to Establish and Sustain Co-Management in Specific Working Areas

Within the areas supported by CREL there are many areas where previous projects had organized Community Based Organizations (CBOs) to support co-management initiatives. With CREL support these CBOs (RMOs and VCGs) are in the process of obtaining formal rights to public waterbodies under the Ministry of Land. In Year 4, CREL made notable progress towards this formal recognition.

In wetlands, CREL has facilitated long term co-management of ecosystems. In the Hakaluki Haor ECA, the Ministry of Land recognized 24 out of the 89 public land units covered by swamp forests as sanctuaries, but these are scattered and not well defined within the larger swamp forest areas. Because ecological integrity is crucial to conserve the swamp forests, CREL facilitated a high level visit from the Ministry of Land to Hakaluki Haor and Hail Haor (including Baikka Beel) in September 2016 to propose that the 65 additional parcels of swamp forest land also be declared as sanctuaries. This will require resolving outstanding land demarcation issues that have hampered progress to date. The Additional Secretary, MoL has instructed the field administration for immediate action.



Photo 5: Additional Secretary, Ministry of Land meeting with CREL staff and Moulvibazar District Officials on declaration of more swamp sanctuaries in Hakaluki Haor.

CREL has another priority target to formally incorporate 17 parcels of public land into the existing Baikka Beel wetland sanctuary, a proposal which has been pending at the Ministry of Land since 2014. Repeated meetings with Secretary and Additional Secretary of the MoL were held to pursue this expansion in Year 4. As a result, this issue was also addressed in the September 2016 Ministry of Land visit noted above, where the Additional Secretary clarified the process for official notification and instructed the local land administration to take necessary action.

CREL has facilitated the process for securing 11 *Jalmohals* (water bodies) under MoU for long term co-management and handing these over to community organizations. Out of the 11 water bodies six have been handed over to the community organizations and the remaining five are under process. In Hail Haor the handing over of an additional 14 waterbodies is pending due to writ petitions (mainly brought by the community organizations to prevent loss of their past rights to these waterbodies established under previous USAID support (MACH project). Three of the 14 waterbodies have an MoU signed, but are pending withdrawal or resolution of the writ. To

resolve the issue a meeting with Deputy Commissioner (DC) took place in May 2016 and a decision was made to proceed in the judiciary system. To mobilize the community organizations (RMOs), CREL facilitated another coordination meeting with District Fisheries Officer after the DC meeting to seek an alternative solution for writ.

In Year 3 CREL drafted two Ramsar Information Sheets (RIS) for Nijhum Deep National Park and Hakaluki Haor in discussion with the FD, DoE and MoL. In Year 4, the Ramsar Secretariat was contacted for primary review of the drafted RISs and they suggested CREL update the drafted RIS using the new RIS version which requires GoB agreement to submit proposals. CREL has re-drafted the two RIS for submission to FD and DoE.

Current status: MOL has announced protection for 24 public land units of swamp patches as sanctuaries. Facilitation is ongoing with MoL to recognize all of the community restored swamp forests in Hakaluki Haor (for a remaining 65 land units). MoL is also being pursued for formalizing the expansion of Baikka Beel sanctuary. Six waterbodies were handed over to community organizations, but legal solutions to the writs brought on others need to be found so that MoL can reserve them again for the community organizations. Two Ramsar RIS have been drafted.

Activity Year 4 Deliverable	Status
Allocation of 24 Jalmohals (waterbodies) for community management, and 89 land units (544 ha) of swamp forest as special wetland conservation areas, and 29 ha as additions to permanent wetland sanctuaries.	<u>Completed</u> : 24 land units have been declared as swamp sanctuary <u>In progress</u> : remaining 65 swamp land units with MoL <u>Completed</u> : 6 waterbodies handed over to community organizations <u>In progress</u> : 19 other jalmohals - 5 with district administration and 14 in legal issue
Regular CBO participation in District Jalmohal Committee, CREL Wetland Committee, Upazila Fisheries Resources Conservation and Development Committees (UFRCDC), and Upazila ECA committee meetings.	<u>In progress</u> : CBOs are participating in different meetings
Proposals for new or strengthened designation for biodiverse areas submitted (wetlands nominated as Ramsar sites).	<u>In progress</u> : Ramsar proposal in progress

Sub IR 1.2 Increased Demand for Better NRM

Activity 1.5 Building Capacity of GoB and LGIs (Local Government Institutions)

To increase awareness among stakeholders of the legal framework of NRM and co-management, CREL has targeted Upazila-level training for government officials (Union Parishads (UP)). CREL has worked to ensure that UPs understand the role of co-management and CMOs in multi-year and Annual Development Plans and their importance in climate change adaptation. In Year 4, CREL assisted 30 Union Councils to prepare annual plans that address their climatic vulnerabilities, based on local PCVA already conducted and other information provided by CREL to CMO representatives. CMOs and UP standing committees used their training on policies given to Upazila and Union Parishad members by CREL. The target was exceeded due

to the effectiveness of processes to incorporate the local demand into Annual Development Plans.

There is also a need to improve the dissemination of climate-related hazard warnings (including cyclones, droughts, fires and weather forecasts).

Activity Year 4 Deliverable	Status
Climate-related information incorporated into 22 UP Annual Plans	<u>Completed</u> : UP ADP completed in 30 UPs
Enrollment of 25 CMOs in DMIC network	<u>Cancel</u> : DMIC enrollment has been postponed
Hazard warnings in CMO plans; stakeholders using climate information in their decision making.	<u>Completed</u> : climate change information incorporation

Activity 1.6 JDR the Third Scholars Program

Evidence-based results are one of the most effective ways to influence changes in policies and legal frameworks. JDR 3rd Research Grants are offered through Winrock and regional offices prioritize research topics. The grants support researchers in the field, monitor their progress and findings, and provide recommendations to CREL. In this period, data collection and analysis for two ongoing studies aimed at documenting wetland co-management benefits and economic valuation of mangroves was completed, with further analysis and documentation to continue in Y5.

Mangrove Economic Valuation Research

The key research question this study attempts to answer is the valuation of Sundarbans mangrove forest ecosystems services. This extensive research is comprised of an economic valuation of cultural/tourism services, storm protection services, carbon stock and provisional services of the Sundarbans Reserve Forest with an assessment and change in the land cover and forest health including carbon stocks in the SRF. In Year 4, the study completed a series of technical reviews and findings will be finalized and shared with stakeholders in January 2017. This information will be used to inform policies related to forest entry fees, forest improvements and protecting mangrove forest against threats.



Photo 6: Regional JDR 3rd- Policy consultation on Amendments in Wetland related policies.

Wetland Research

This study attempts to quantify social and ecological benefits or losses under different wetland management systems comparing traditional wetland management and co-management systems. The study will be completed in January 2017 with stakeholder sharing. The findings of this research will be used to inform policy makers on roles and efficacy of community-based wetland co-management for wise use of wetland resources.

Activity Year 4 Deliverable	Status
Two policy briefs completed, roundtable workshop to share the findings, at least one peer reviewed journal article.	<u>In Progress</u> : Mangrove research policy brief being drafted <u>In Progress</u> : Wetland Policy brief being drafted

Activity 1.7 Improve Knowledge for Better NRM

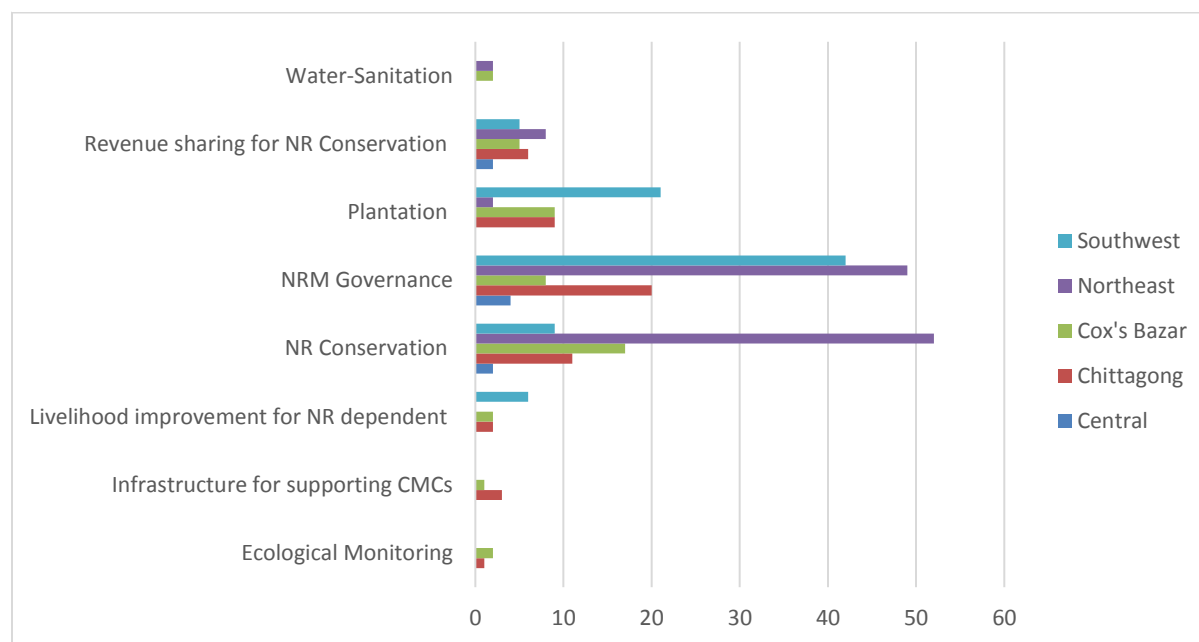
Building support for policy reforms and related consultation processes requires evidence as well as increased awareness of why the policy matters. Knowledgeable advocates (champions) can be key for proposed changes. Sustaining CREL's policy successes requires a set of champions for co-management of biodiverse ecosystems. During Years 1-3, CREL worked with a range of individuals within GoB and in civil society on policy issues and on enhancing implementation of co-management. In Year 4 this became more systematic and forward-looking to mobilize informed and influential support for better NRM and co-management.

This activity focused on identifying and orienting those with current and future influence on policy (such as the NGO sector, former senior bureaucrats, and other popular figures and opinion leaders), and was closely coordinated with activities generating knowledge and communicating that evidence of impacts. It facilitated remaining policy reforms, policy implementation, and linked with improving the sustainability of co-management such as leveraging of resources.

CREL also promoted co-management by brokering links between government agencies/ministries and champions and grassroots stakeholders, facilitating policy dialogue; and communicating with the media to publicize events and issues. This was complemented by training and study visits under IR2 for government officials to build understanding and champions within government.

CREL has mobilized NRM progress by means of a system for better documenting and sharing of community and local institution demands and suggestions for NRM improvements via its online monitoring system, CreLink. Up through Year 4, a total of 302 NRM demands were entered from 91 different institutions.

Figure 1: CrelLink shows from 2014-2016, VCF and VCG demands were highest for NR governance, conservation and afforestation directed at local administration, local government and other co-management members in 4 regions.



Activity Year 4 Deliverable	Status
Champions at local and national level understand CMO and CREL messages; champions active in promoting these messages.	Completed: CrelLink NRM demand tracking completed
At least three policy dialogues, events and media reports; 2 policy briefs, CrelLink NRM demand results and follow-up.	In progress: dialogues completed; policy briefs being drafted; NRM demand reported in CrelLink

4.2 Enhance Knowledge and Capacity of Stakeholders (IR 2)

CREL builds the capacity of individual stakeholders and institutions, especially CMOs and GoB, to implement co-management and improve NRM and climate-resilience. CREL focuses on enabling CMOs to be sustainable organizations that can sustainably function and support natural resources conservation goals without project support. CREL does this by means of designing and implementing a range of training activities and ensures sustainability through the development of trainers, high quality training support documents, consistency in training delivery, and offering systematic feedback and updates on a regular basis.

The project has been working with 50 CMOs/CBOs, aligned GoB agencies and people dependent on natural resources to strengthen their capacities in NRM, knowledge of climate change and diversify livelihoods options. During Year 3, a capacity-building action plan was developed for each CMO, training conducted with CMO leaders and a CMO/CBO operational toolkit drafted on how to operate in the long term. During Year 2 and 3 of the project, CREL

began the development of five curricula for universities and GoB training institutes on climate change, NRM and co-management issues. The CREL team supported UPs and CMOs to include climate change and NRM considerations into their respective long term and Annual Development Plans.

In Year 4, CREL facilitated training of new and reformed CMOs, mainstreamed use of the operational toolkit for CMOs, facilitated CMO links with service providers and strengthened networking among CMOs. CREL developed content for the university curricula to be incorporated into the existing curricula of the relevant universities and government's institutes.

Key Accomplishments

In Year 4, CREL completed the following:

- 80 CMOs/CBOs further strengthened in co-management of natural resources
- 54 CMOs/CBOs and 26 VCGs with Annual Development Plans
- Regional dialogues with the private sector in Chittagong and Khulna region to explore financial support
- National dialogue on financial sustainability of CMOs at Cox's Bazar on 23 March 2016
- 15 CMOs demonstrated accountability and transparency in open-days
- A study visit program to Thailand on co-management for 12 GoB officials in July 2016
- The Bangladesh Public Administration Training Center (BPATC) incorporated curricula on co-management and NRM into existing training courses, which will reach a large number of professional government officials
- CREL and Friends in Village Development Bangladesh (FIVDB) in its fourth phase of the Financial Entrepreneurial Literacy Program trained 2100 VCF members through 105 FELCs. Trained VCF members gained new skills and reduced dependency on natural resources.
- At the regional level 944 CMO (336 women) members received training on climate change adaptation and climate resilient NRM
- 26 DoF officials trained on climate-resilient wetland and fisheries management

Key Indicator	Year 4 Target	Year 4 Result
# stakeholders using climate information in decision making	10,000	Completed

Sub-IR 2.2 Strengthened Organizational Capacity of NRM institutions

Activity 2.1 Form CMOs in new sites.

CREL is working to bring selected new areas/sites under co-management for improved governance and bio-physical condition. Bringing in additional CMO sites has been challenging as they require government, community and environmental concerns to all align at the same time. This has been elusive for the addition of three CMOs as explained below.

Halda River basin – After three fisher federations were formed and a management plan drafted and shared with relevant stakeholders in collaboration with the Department of Fisheries, the DoF

requested CREL to temporarily halt activities at the Halda river site, including CMO formation, to ensure greater integration with other DoF activities focused on the Halda River management planning. CREL will work with DoF and determine if the project can resume activities in this area.

Ratargul Special Biodiversity Conservation Area – Eight Village conservation fora in Ratargul Special Biodiversity Conservation Area were formed. Due to conflict within the community, the Forest Department slowed down the CMO formation. CREL will monitoring the situation with the Forest Department and resume support to his process if and when possible.

Someshwari River - In discussions on 4 May 2016 with the regional coordinator (Northeast), CREL management decided to drop this site at the request of the GoB.

Activity Year 4 Deliverable	Status
1 CMC, 1 co-management body and 1 wetland CBO formed.	Swomwshari River and Halda River CMO formation dropped; waiting for FD decision to form CMO at Ratargul Special Biodiversity Conservation Area

Activity 2.2 Help CMOs prepare Annual Development Plans

CREL regional staff assisted each CMO to prepare its own Annual Development Plan (ADP) for the fiscal year July 2016-June 2017 that identifies key activities for the year along with a budget/resourcing plan. This provides guidance for CMOs to seek government resources and for respective government partners to include allocations in their annual budgets. At the same time resources from non-government and private sector will be sought to implement the plans. The ADPs were developed based on existing PA management plans, wetland landscape plans, CBO plans, and/or were informed by parallel preparation of multi-year plans (see Activities 3.2 and 3.3). 54 CMO ADPs were completed as well as 26 VCG ADPs. Better planning and experience in planning is being seen by CMOs as having considerable value to achieving their objectives therefore targets are being exceeded.

Activity Year 4 Deliverable	Status
54 CMO ADPs including activity calendar and endorsed by CMO through meeting minutes.	80 ADPs Completed (54+ additional 26 VCGs)

Activity 2.3 Build CMO capacity to access resources

CMOs need to mobilize resources to implement their planned activities. CREL regional and site staff supported capacity building of CMOs to explore, identify and mobilize access to resources (finance, in-kind and services) and support improved NRM from government agencies, NGOs, projects and private organizations. This includes orientation from those providing potential services and resources explaining their modes of operation and how these resources can be accessed or targeted to support CMO objectives and needs. CREL organized a national dialogue on Sustainable Financing of Co-Management in Bangladesh where Secretary of the MoEF and, the Director of the USAID Economic Growth Office were present and the Chief Conservator of Forests (CCF) of Bangladesh Forest Department chaired the workshop. Representatives from Ministry of Environment and Ministry of Law, Forest Department, Development Partners (USAID, German Commission for International Development [Gesellschaft fur Internationale Zusammenarbeit] (GIZ), International Union for the Conservation of Nature, (IUCN)), the

private sector and CMOs from different parts of the country also attended.

A regional dialogue with private sector actors was held in Chittagong and the Southwest region to explore funding for CMOs to implement their planned activities. The Forest Department took the leadership for the Chittagong dialogue whereas the Department of Environment was the leader of Southwest dialogue. CMOs of Chittagong Region sent three proposals to three private companies to support specific activities from ADPs with discussions ongoing. This also contributes to Activity 2.9.

During PY4 nine CMOs mobilized physical investments by Union Parishads against CMO requests (providing tubewells and/or latrines, and earthworks to restore channels or raise areas for tree planting). Similar requests by over 20 CMOs have been endorsed and included in annual development plans by the Union Parishads and are expected to be implemented during PY5. During Y4, twenty-four forest and seven wetland co-management organizations developed and submitted proposals to receive capacity building grants from the CREL grants program that were subsequently approved by CREL management.



Photo 7: USAID Director of Economic Growth Office at dialog on CMO sustainability

Activity Year 4 Deliverable	Status
Key members of 31 CMOs have enhanced capacity to access to resources.	Completed

Activity 2.4 Finalize and orient CMOs on the Co-Management Toolkit

In Year 3, a CMO toolkit was drafted and endorsed by the Project Director of the FD and provided to all CMO members. This toolkit serves as an operational guideline and reference for CMOs (customized for CMCs, VCGs and RMOs) when orienting new CMO members during their operations after CREL. The CREL team facilitated orientation for 191 (142 men and 49 women) members of CMOs on the toolkit during the reporting period to enhance their capacity.

Activity Year 4 Deliverable	Status
Toolkit finalized, endorsed by FD and other relevant agencies, printed and distributed. Orientation of all CMOs on Co-Management Legacy Toolkit.	Endorsed by PD (Forest); Orientation of selected members complete

Activity 2.5 Provide Capacity Building Training to Newly Formed or Reformed CMOs

During Year 4, training programs were conducted based on the needs of newly formed CMOs and/or a major reformation of a CMO. The training topics included:

- Financial management (including managing grants)
- Fund raising/resource mobilization
- Adaptive natural resource management in biodiverse areas (considering climate change)
- Protected area governance and conflict mediation
- Disaster risk reduction
- Gender equality and leadership
- Ecological monitoring for biodiversity
- Ecotourism (e.g. visitor centers, guides, and entry fees)
- Rules, regulations and laws
- Joint patrolling
- Organizational management

During Y4, CREL facilitated training for reformed CMO members including 1,408 (1,071 male and 337 female) to build capacity. More training on fund raising and resource mobilization including proposal writing was an expressed need to enable to better access GO-NGO-Private sector donors for financial support. Training and support will be provided in Year 5 to newly formed CMOs and for major CMO reformations.

Activity Year 4 Deliverable	Status
Reformed CMO member orientation (1,408 total including 1,071 men and 337 women members)	Completed

Activity 2.6 Strengthen operation, voice and accountability of People's Forum

In Forest PAs, the PF provides a critical intermediary between VCFs and CMCs to raise common issues with government stakeholders in co-management. In Year 4, CREL oriented all members of the 23 PF to ensure they understand how they are to function, can oversee their member VCFs, orient new members after the project, direct resources and activities under the framework of CMC plans to VCFs and coordinating grassroots voices in CMCs. During Year 4, 484 people were trained on these operational guidelines.

Activity Year 3 Deliverable	Status
All PFs oriented on operational guidelines, PF leaders oriented in presenting, public events and feedback sessions institutionalized between PF and member VCFs. (243 male 241 female members were oriented)	Completed

Activity 2.7 CMC operationalize existing Interpretation Centers and Student Dormitories

Interpretation centers and student dormitories constructed through previous USAID support are underused due to lack of agreement between FD and CMCs on how they will be operated and maintained. In Year 3, four CMCs submitted requests and management plans to FD for these facilities. CREL followed up with FD to find a suitable arrangement, and oriented CMCs on operating and maintaining these facilities during Q4 of Y4. The relevant District Forest Officers (DFOs) of Chittagong, Cox's Bazar South and Moulvi Bazar approved CMOs to manage existing functional interpretation centers and student dormitories. This was a crucial step and pre-requisite for CREL support for investments in repairs these structures and will be supported with repairs and construction in Year 5.

Activity Year 4 Deliverable	Status
To the extent possible, existing interpretation centers and student dormitories will be made functional, open to visitors and operated through active CMC involvement.	In progress

Activity 2.8 Organize “Open Days” for community/public to ensure CMO accountability

Ensuring good governance in CMOs is a major aim of CREL. To achieve good governance, a forum for local performance review and public accountability is needed. CREL introduced CMOs to a system of “open days” (effectively public audits) on an annual basis, to ensure greater transparency and accountability. The audit “open house” was publicized in advance (usually one to two weeks). On this day the CMO presented its activities, the public was invited to ask questions and review meeting minutes. This approach helps to dispel rumors or inaccurate information that might circulate, and instills a strong sense of responsibility in keeping up-to-date and accurate accounts of finances, meetings, and activities. Although approaches vary by CMO, these events are organized in a way that is fun and festive and provide another platform for attracting CMO and non-CMO community members to discuss NRM and climate change-related issues and opportunities. CMOs included activities such as guided walks, school visits, women-only sessions.



Photo 8: CMC member reporting on activities

During Year 4, CREL helped support open days in 15 CMOs. While they varied widely across the country, every CMC presented their Annual Development Plan (2015-2016) to the community, members of Union Parishad, teachers, journalists, ex-members of CMC, NGO representatives, resource user groups, religious leaders, cultural activists, women leaders, ethnic people, and youths.

Activity Year 4 Deliverable	Status
Open days conducted by all CMOs	Completed

Activity 2.9 Strengthen networking among CMOs

During Y4, CREL supported the reforming of regional CMO networks and network committees in two regions. A national network workshop was held in Dhaka to review the current constitution and make amendments. The Cox’s Bazar dialog described in Activity 2.4 also has contributed to this and time was provided for networking activities at that event.



Photo 9: Consultations during Nishorgo Co-management Network sessions



Photo 10: Nishorgo members revising constitution

Activity Year 4 Deliverable	Status
Four regional networks of CMOs for biologically diverse areas active with meetings not requiring CREL support. Observation of co-management day through a national CMO conference.	Regional networks need more facilitation to be functional. National Event held in Cox's Bazar (See 2.4)

Activity 2.10 Recognize CMO contributions to conservation

CMOs are working to conserve and protect natural resources. To encourage positive competition for conservation among the CMOs and recognize achievements a system was developed that encourages CMOs to showcase their accomplishments using CREL-developed CMO performance indicators and involving relevant government agencies. The selection of the champion CMOs was made by government partners using a CREL protocol for the recognition process. This acted as an incentive for CMOs to improve their performance as it relates to a number of criteria including improved biophysical condition of PAs.

Data collection of CMOs for the month of July 2015 to June 2016 based on six criteria was completed but yet to be sent to the committee for final selection. The name of the best performing CMO will be declared in Y5 through a national event.

Activity Year 4 Deliverable	Status
Best performing CMOs are recognized	In Progress: Data collection Completed

Activity 2.11 Develop knowledge products on co-management

This activity is part of a wider knowledge product initiative to document and make publically available lessons learned, good practices and evidence that cover co-management impacts and outcomes resulting from the interactions between CMO institutions, NRM and livelihoods.

Activity Year 4 Deliverable	Status
In collaboration with Com 6 and M4 develop lessons and success stories. "Book" (electronic or hard copy) on success stories and lessons of co-management made publically available.	In progress

Sub-IR 2.1 Improved Knowledge and Skills of NRM Stakeholders

Activity 2.12 Develop curriculum/modules and conduct training of trainers/orientations for teachers and instructors of universities and GoB institutions

To support the training of future GoB staff and the next generation of environmental managers, CREL is working with relevant universities and GoB training institutes to introduce, enhance and update their curricula on NRM, REDD+, carbon measurement, climate change and natural resource co-management.

These modules and curricula outlines were initially shared with 16 universities (30 Departments) and seven GoB training institutions. Workshops and sharing meetings were organized with universities and training centers to get feedback on existing syllabi and potential requirements for improving the content and curricula.

The initial attempts to develop course content by experts resulted in widely different levels of detail, content and curricula structure. As a result, CREL engaged the services of a curriculum specialist to lead the consolidation of the materials developed to date, incorporate additional globally available resources and construct curricula that were consistent with accepted norms for high level curricula and the currently ongoing World Bank university curriculum reform initiative. The international consultant has been developing the training modules under *Bangladesh Climate Resilient Ecosystems Curriculum (BACUM)* based on the developed curricula of CREL as well as training modules of Lowering Emissions in Asia's Forests (LEAF) project as follows:

- Introduction to Climate Change
- Climate-Resilient Ecosystem Conservation
- Co-management of Natural Resources
- REDD+ in Climate Change Context and
- Forest Carbon Measurement and Monitoring

To implement the training modules, the following steps of the BACUM are adopted:



Photo 11: Professors and Dean attended the sharing meeting on curricula at SAU, 14 October 2015



Photo 12: Participants of workshop to consider the curricula to incorporate into the training course of BPATC.

- Needs Assessment
- Module Syllabus Development
- Detailed Materials Development
- BACUM Orientation Workshop
- BACUM Incorporation
- Lessons Learned and Success Stories and
- Evaluation and Revision

In Year 5, CREL will arrange a Training of Trainers (ToT) and orientation for the university teachers and other instructors on specific modules/curricula to the universities and government institutions that have expressed interest to include topics from one or more of curricula/modules in their courses.



Photo 13: Teachers of North South University discuss training need assessment and curricula with CREL staffers of North South University (NSU)

Activity Year 4 Deliverable	Status
Modules developed and revised at five institutions; teachers' orientation arranged, curriculum incorporation followed-up.	In progress

Activity 2.13 Provide Flip-Chart Training on climate change adaptation and climate resilient NRM for new members and newly reformed CMOs and VCFs and new CMO sites

During Y4, CREL arranged staff training on climate change, climate resilient NRM issues with a view to build capacity and skills for the VCF members using a flip-chart. CREL arranged the training on climate change and climate resilient NRM for new members of newly reformed CMOs and new CMO and VCF/VCG of Ratargul Nijhum Dwip, Baroyadhala, Halda River basin, and VCF/VCG members missed in earlier trainings in the four regions. In total, 3,057 participants including 1,708 women of VCF/VCG members and 944 CMC members attended the training).



Photo 14: Women of Sarankhola, Khulna VCF learning about CCA and NRM.

Activity Year 4 Deliverable	Status
Flip-chart training conducted for new members of newly reformed CMOs and the new CMO site.	Completed

Activity 2.14 Arrange study tours/conferences/workshops on climate resilient NRM focused on forests and wetlands for GoB personnel

CREL arranged study tours to other countries or supports attendance at conferences to broaden the GoB's understanding and ownership of policies and strategies of climate resilient NRM, wetlands/fisheries, forests, climate change adaptation and co-management.

Study Tour to Thailand

CREL arranged an overseas study-visit program in Thailand from 20-26 July 2016 in collaboration with Regional Community Forestry and Training Centre (RECOFTC), Thailand on participatory wetlands and aquatic ecosystem co-management. This visit focused on protected area co-management for biodiversity conservation of forests and wetlands in Thailand for 12 government officials including one woman.

The FD Project Director for CREL presented a paper on status on progress and challenges on forests and wetlands in Bangladesh. Participants were from the Ministry of Land (MoL), Forest Department, Department of Fisheries, Department of Environment and the Planning Commission. The main objectives were to share and learn about the protected area co-management approaches, climate resilient NRM and biodiversity conservation. The visit program also built capacity and practical knowledge on NRM, wetland policy and conservation strategy in PAs, arranged by RECOFTC. Included were wetlands management and policy in Thailand, overview of natural resource management, participatory tools and techniques for co-management of wetlands ecosystems. RECOFTC also arranged field visits to community forestry initiatives.



Photo 15: Government Officials observe during visit to RECOFTC, in Thailand

Asia-Pacific Forestry Conference: CREL supported two senior government officials from the Forest Department to attend the twenty-sixth session of the Asia-Pacific Forestry Commission and Asia-Pacific Forestry Week 2016 at Pampanga, Philippines from 22-26 February 2016.



Photo 16: In house training workshop session at RECOFTC, Thailand

Paris Conference of Parties-21: CREL supported two senior officials from the Forest Department and MoEF to participate in the Conference of the Parties (COP)-21 to the UNFCCC in Paris from 28 November to 12 December 2015.

CITES Conference of COP: The CCF of the Bangladesh Forest Department participated in the Convention for International Trade in Endangered Species (CITES) Conference of Parties (COP) held from 24 September to 5 October, 2016 in Johannesburg, South Africa.

Activity Year 4 Deliverable	Status
Scope of Work (SoW) for facilitating organization selection, papers presented; schedule, study visit program completion reports.	Completed

Activity 2.15 Arrange study tours and cross site visit program on climate-resilient NRM focused on forests and wetlands for CMO members and stakeholders.

CREL is arranging for a stakeholder visit program in Nepal in late 2016 to improve knowledge and understanding on climate resilient NRM and co-management for CMO leaders from Bangladesh (including local level officers who serve as member-secretaries).

Activity Year 4 Deliverable	Status
SoW for facilitating organization selection trip schedule, selection and visit completion reports.	In progress

Activity 2.16 Arrange regional level PA cross site visit program on climate-resilient NRM focused on forests and wetlands for CMO members and stakeholders

CREL uses stronger CMOs as positive examples for other CMO members to learn from and be inspired. CREL facilitates cross-site visits to these strong CMOs to support the development of nascent CMOs. Moreover, by building relations between CMOs, CREL establishes links that support networking. In Year 4 CREL funded 85 individuals on cross-site visits for CMO members. For this program, the Chittagong region arranged learning programs in vermiculture and compost preparation, market linkages and demonstrations of the Department of Agriculture Extension. In total, 17 CMO and VCF members, including 3 women, participated the visit program. The Chittagong Region also arranged 3 cross visits programs for 42 CMC members to share their experience, achievements, progress and challenges with other CMO members.



Photo 17: CMC members of Chittagong Region visited Sreemongal

A NE Region team of consisting 26 CMOs members (16 men and 10 women) visited different sites and activities of CREL in Cox's Bazar and met with CREL, CMC, VCG, CPG and FD staff in Cox's Bazar region during 25-27 September 2016.

Co-management Day was observed at Cox's Bazar region on 21st March, 2016 by the CMC members from different regions to share their achievements, progress and challenges.

Activity Year 4 Deliverable	Status
Prepared trip plan, visits and reports.	Completed

Activity 2.17 Conduct training on applied conservation biology, climate change and co-management: a certificate course for stakeholders

As per provision of the TPP targets one training course on applied conservation biology, climate change and co-management was conducted in Year 4, to improve knowledge, skills and capacity on climate change adaption, climate resilient NRM and co-management for government staff. This was a certificate course attended by 26 officers of the three CREL counterpart government departments arranged by CREL's Project partner, the Bangladesh Centre for Advanced Studies in Sreemongal from 15-19 May 2016 for 26 government officials from FD, DoF, DoE and senior

students from selected universities attended the training.

A one-day field visit program at Baikka Beels and Lawachara National Park ecosystems was included to interact with RMO and CMC members at their offices to learn how co-management members for biodiversity conservation and management function in the field. The training course covered issues on Degradation of Forest Ecosystems, Concepts and Basics of Climate Change, Climate Change Impacts on Forests and Wetlands Ecosystems, Wetlands Management Policy and Acts, Co-Management and Sanctuary Guidelines and Strategic Planning and Management through Strengths, Weaknesses, Opportunities and Threats SWOT Analysis. Pre and post training assessments and course evaluations were undertaken by the participants.



Photo 18: Dr. Niaz Ahmed Khan, Professor- DU, conducting session in the training



Photo 19: Participants in closing session of the training course

Activity Year 4 Deliverable	Status
Training curriculum and schedule revised, materials and revised modules/manuals developed, course conducted.	Completed

Activity 2.18 Support students to strengthen capacity and knowledge about co-management and climate-resilient NRM and livelihoods.

At the onset of Year 4, CREL planned to engage research students of the relevant universities with CMOs and regional partners to assist CMOs and the CREL team while gaining experience and practical knowledge on co-management and climate-resilient NRM and livelihoods. However, the activity was dropped given the overlap on capacity development accomplished via the curricula development for universities.

Activity Year 4 Deliverable	Status
Facilitate student interns and research students being matched to tasks/managers/sites. Guidelines and work plans with students. Intern/research reports that address issues agreed with CREL. Reports on course field visits.	Dropped

Activity 2.19 Orientation program for Divisional Forest Officers on sustainable co-management for biodiversity conservation focused on forests.

Senior-Level FD officials including Divisional Forest Officers (DFO) oversee and are involved in co-management of PAs, but are frequently transferred between locations and many lack understanding of the institutions involved and how they function. To address this, CREL, in collaboration with the Forest Department, arranged a one-day workshop on sustainable co-management for biodiversity conservation on 5 May, 2016 at the Forest Department for Divisional Forest Officers. 37 DFOs (33 men and 4 women) participated the workshop. Topics included sustainable co-management approaches in forest protected areas, sustainable financing for co-management and socializing strategies for the benefits of co-management and biodiversity conservation.

Activity Year 4 Deliverable	Status
Current curriculum and materials revised, resource person selected, orientation conducted, report	Completed

Activity 2.20 Train Financial Entrepreneurship and Literacy Centers teachers and supervisors

During Year 4, CREL completed the 3rd phase of Financial and Entrepreneurial Literacy Program (FELP). 2,594 VCF members received the training implemented through 131 centers at four CREL regions. Among other topics, the VCF members improved their literacy knowledge and skills by 66%, knowledge and skills



Photo 21: A participant practicing the literacy on FELP training at Sreemongal.



Photo 20: The Shayak facilitating session on FELP at Sreemongal.

awareness on livelihoods development by 89%, level of entrepreneurship and business understanding and initiative by 75%. The 4th phase of this seven-month program was started in July 2016 and it will continue up December 2016 for 105 FELC including 2100 VCF members.

Activity Year 4 Deliverable	Status
Teachers for new FELCs trained and able to deliver training to beneficiaries targeted in activity 4.6. Contract revised, basic training arranged for Sahayaks, supervisors trained, training reports.	In progress

Activity 2.21 Develop “master trainers” in co-management

A recurrent challenge in co-management before and during CREL has been changes in the leadership in CMOs. Changes in CMO membership are inevitable and even desirable. Rotation of leadership enhances accountability and limits the risk of control by a few individuals. However, new CMO members require orientation on the practical operation of co-management through CMOs and their role and responsibilities. The toolkit (Activity 2.4) provides a reference

manual for this and was used for training more than 20 people (from Govt., CMOs, NGO partners) who may further be developed as master trainers in the future. As large number of CMO staff including GoB staff have already had considerable training on this topic further training was deemed unnecessary.

Activity Year 4 Deliverable	Status
20 experienced persons (officials of FD, DoF, DoE and regional champions) able to deliver high quality training to new members of CMOs on practical co-management and the toolkit.	Completed

Activity 2.22 Training/orientation for relevant fisheries and administration officials and community leaders on revised/new policies and guidelines and climate resilient wetland and fisheries management

Although CREL has already trained a number of DoF officers this needs to be expanded due to regular transfers of staff and promote sustainable fisheries co-management in some additional Upazilas. Guidelines developed on wetland co-management and wetland sanctuaries in Year 3 were endorsed by MoL and DoF in Year 4 and formed the basis of trainings and orientations to roll out their practical use in Year 4. Training covered relevant Upazila and District level government officers including District Fisheries Officers, Upazila Fisheries Officers, Assistant Fisheries Officers and the Assistant Commissioner (land). In addition, engineers of Bangladesh Water Development Board and Local Government Engineering Department, Agriculture Extension Officer, and Social Welfare Officer were trained where appropriate. Also in the four Upazilas noted below, leaders of the fisher community organizations (where they exist) were included in the training. The focus was on CREL wetland sites and also on the following areas agreed in the TPP: Sadar and Barhata Upazilas under Netrokona District, Nasirnagar Upazila under Bramanbaria District and Dumuria Upazila under Khulna District. The training covered wetland sanctuary guidelines, co-management guidelines, wetland leasing policy, wetlands and fisheries management, and conservation of aquatic biodiversity.



Photo 23: PD-CREL, DoF conducting session in training workshop on CR wetlands and fisheries management at Sreemongal, March, 2016



Photo 22: Participants visited wetlands of Baikka Beels for learning co-mgt issues of wetlands March, 2016

Training sessions/workshops were held at Upazila, region and national levels according to needs and included 65 people. The activity directly enhanced implementation of co-management in CREL working areas, planning, and more broadly enabled implementation of policy changes into practice.

Activity Year 4 Deliverable	Status
i) Training curriculum developed based on guidelines developed under IR1 and related policy changes, training materials and modules developed. ii) Training held for DoF officials and other key officials. iii) Training held in secondary Upazilas committed under TPP: Dumuria, Netrakona Sadar, Barhata, and Nasirnagar. Resource person selected, training held and report submitted (covering UFOs, AFOs, key Upazila level Government Officials, community leaders	i. Curricula developed, ii. Training completed, iii. Training shifted to Year 5 (if budget permits)

4.3. Strengthening Planning and Implementation of Climate Resilient NRM and Adaptation (IR 3)

CREL has strengthened and expanded the co-management of biodiverse landscapes by developing the capacity of local institutions to manage, protect and restore ecosystems, incorporating climate change adaptation and mitigation into management. The main targets for Year 4 were to complete the development of comprehensive Forest PA Management Plans and associated CMO long-term plans, and to support implementation of key actions under those plans.

Key Accomplishments

In Year 4, CREL completed the following:

- 5 forest PA management plans were approved by the government (Himchari National Park, Chunati Wildlife Sanctuary, Khadimnagar National Park, Fashiakhali Wildlife Sanctuary and Dudpukuria-Dopachari Wildlife Sanctuary)
- 9 more forest PA management plans were drafted, 5 of which sent to the MoEF for approval
- 20 CMC long-term plans were developed
- 8 wetland community organization long term plans and 2 wetland management plans were developed
- 443 village level climate change adaptation plans were developed through participation of 7,886 women and 6,654 men
- Improved Cook Stoves were adopted by 1064 households in PA landscapes
- Collected 10,503 turtle eggs and safely released 9,100 hatchlings into the sea

Key Indicator	Year 4 Target	Year 4 Result
<i>Number of hectares (ha.) of biological significance and/or natural resources under improved NRM as a result of USG assistance</i>	BS 742,000 ha ONR 185,000 ha	BS 763,740 ha ONR 186,924 ha
<i>Number of hectares (ha.) of biological significance and/or natural resources showing improved biophysical condition as a result of USG assistance</i>	BS 215 ha ONR 27	BS 643 ha ONR 84

Sub-IR 3.2 Improved Planning for Climate Resilient NRM.

Activity 3.1 Develop/update Forest Protected Area (PA) Management Plans

A Forest PA Management Plan is a guiding tool for long term protected area management. These plans incorporate climate change adaptation and mitigation into each protected area, including activities and investments within the protected area as well as for surrounding communities. The plans are for 10 years and outline FD and CMC management and operations, investments for biophysical improvement, and how to address climate vulnerability. Stewardship of the management plan lies with the FD with support from the community through the CMCs who assist with PA protection, and the CMCs take the lead in guiding sustainable resilient land uses and livelihoods in the landscape areas outside the PAs. The Forest PA Management Plan outlines responsible parties regarding specific issues such as engagement of CMCs in restoring ecosystem productivity, biodiversity, climate resilience/adaptation, resource substitution, sustainable non-extractive uses such as ecotourism, zoning (where appropriate), participation and representation (especially female stakeholders), and participatory monitoring approaches.

During Year 3, CREL submitted five 10-year Forest Protected Area Management plans that were subsequently endorsed by the national-level Forest Department and submitted to the MoEF for final approval. In year 4, five forest PA management plan (Himchari National Park (NP), Chunati Wildlife Sanctuary (WS), Khadimnagar NP, Fashiakhali WS, Dudpukuria-Dopachari WS) were approved by the MoEF. Moreover, nine forest protected area (Lawachara NP, Rema-Khalenga WS, Sathchari NP, Modhupur NP, Kaptai NP, Medakaccapia NP, Tengragiri WS, Sundarbans East WS and Ratargul PA) management plans were drafted of which five were sent to MoEF through Forest Department and awaiting approval. The remaining four are being revised and will be submitted in Year 5.

Activity Year 4 Deliverable	Status
Nine Forest PA Management Plans drafted	Completed

Activity 3.2 Develop CMC Long-term plans

The Forest PA Management Plans are elaborate and provide substantial contextual information as well as a focus on FD activities. In several cases there is more than one CMC supporting a PA. The CMCs need their own prioritized subset of these larger plans, that focus on the contribution of the CMC in implementing the respective PA management. In addition, CMC Long-term Plans (LTP) explicitly set out their organizational management and fund raising. During Year 3, CMCs prepared Annual Development Plans drawing from their relevant Forest PA Management Plans where available. Each CMC LTP addresses ways to implement relevant portions of the overarching Forest PA Management Plan, NRM related activities in the landscape area including ways to improve the environment and address climate change, and their respective operations and fund raising and spending. The CMC LTPs will help target CREL and CMC investments during and beyond the remainder of the project. Specific issues outlined in the plans include: how the CMC will operate, its role in support of FD in restoration of ecosystem productivity, protecting biodiversity, climate resilience/ adaptation, resource substitution,

sustainable non-extractive ways of generating returns from PAs such as ecotourism, participation and representation (especially female stakeholders), and participatory monitoring.

Development of Forest related CMC longer term planning was discussed at the Project Steering Committee (PSC), held on 22 June 2016 and urged forward by the Secretary of MoEF and Chief Conservator of Forest Department. It was piloted with the Chunati Wildlife Sanctuary after which the experiences from Chunati were used to develop a facilitators' guideline. The guide was used as a training resource for four regional LTP training workshops to develop a group of resource persons to facilitate LTP development for each CMC. DFOs, ACFs and all ROs from concerned regions were workshop participants who practiced a structured participatory planning process and associated tools and methods. They in turn supported their regional teams to facilitate LTPs for all CMCs. For each CMC, an ad hoc committee was formed from the FD and CMC (PF, VCF, CPG) headed by the concerned ACF to develop the CMC long-term plans. In Y4, 20 CMCs developed their ten-year CMC Long-term Plans which provide the basis for future Annual Development Plans. Of the remaining 2 CMCs, their LTPs will be developed next quarter.

Activity Year 4 Deliverable	Status
22 CMC Long-term plans	20 Completed

Activity 3.3 Develop wetland management plans

CREL supported 11 wetland-based Community Organizations to develop their Long-term Plans (which merge wetland NRM/conservation with climate adaptation/resilience and hence address indicators 8 and 12), and also drafted two Wetland Management Plans for the entire wetland systems for submission to the relevant government agencies and district administration covering two haors.

Activity 3.3a. Community Organization long-term plans

In FY 4, CREL supported eight community organizations (RMOs) in Hail Haor to develop long-term plans (seven new plans, and one for other RMO activities which supplements its plan for Baikka Beel sanctuary which was drafted in PY3). These plans included activities that will promote adaptation (e.g., water conservation and management, diversification, adopting crops with lower water demand), merge mitigation and adaptation (conserving swamp/riparian forest), and improve risk coping by reducing vulnerability and improving early warning systems. In addition, three community organizations (VCGs) in Hakaluki Haor drafted plans, but the remaining VCGs that CREL works with in this haor did not obtain rights to water bodies as of yet for community conservation, so they did not initiate VCG long term plans. In Sonadia ECA development of VCG long term plans remains ongoing.

The community organizations long-term plans included annual breakdowns of their operations in these plans as a basis for their annual development plans. The plans articulate activities by year, an associated budget and sources of funding to implement the plan, and include the process to update and modify the plans periodically in order to keep them current.

Activity 3.3b. Wetland Management Plans.

CREL started to facilitate the development of landscape-level wetland management plans in Year 3 for three systems (Hail Haor, Hakaluki Haor and Halda River). In this reporting year, CREL developed Hakaluki and Hail Haor management plans in consultation with DoE and DoF and submitted these to the concerned Departments and Ministry of Land (which controls the public lands within these haors) as well as Ministry of Fisheries and Livestock for final approval. A plan for Halda River management was also developed but this site was later dropped from CREL's working area (see section 2.1).

These wetland management plans were developed with the aim to ensure sustainable and resilient stewardship of wetland natural resources (especially economically important fisheries but also aquatic plants) and biodiversity conservation (particularly globally and nationally threatened species - notably water birds, fish, herpetofauna). These wetland management plans also focus on issues such as biodiversity and species conservation, climate resilience/adaptation, resource substitution, sustainable non-extractive uses such as ecotourism, limiting adverse changes in use, zoning (where appropriate), re-excavation and maintenance of habitats, participation and representation (especially female stakeholders), and participatory monitoring. These plans will guide the government agencies involved in co-management on influencing and limiting catchment land use changes to minimize degradation of the wetlands.

In the coastal zone, Sonadia ECA already has a draft management plan developed by the DoE, so CREL did not invest further to develop the management plan. CREL hired a consultant to undertake discussions for developing a plan for St. Martins Island ECA with the DoE.

Activity Year 4 Deliverable	Status
(i) Community Organization Long-term Plans agreed by 7 RMOs and 10 VCGs, and Annual Development Plans agreed by the same CBOs	(i) Complete: 7 RMOs, 3 VCGs In progress: 7 VCGs
(ii) Wetland Management Plans endorsed by government for two haors and Halda River	(ii) Completed: 2 haors submitted, Halda dropped
(iii) Revised Wetland Management Plan for Sonadia ECA and St Martin's Island ECA.	(iii) In progress: St Martin's (Sonadia not needed)

Activity 3.4 Identify Landscape Level Climate Change Vulnerabilities through PCVA and Develop Climate Change Adaptation and Mitigation Plans.

Villages developed PCVAs in prior years of CREL, and these PCVAs formed the foundation for target villages to make their own simple adaptation and mitigation plans. In Year 4, 443 village adaptation plans were developed with assistance from the project covering 14,540 community people (7886 women, 6654 men). These plans include activities that promote adaptation (e.g., water conservation and management, biophysical improvement) and mitigation (e.g. maintaining and enhancing regeneration of forests, using more efficient stoves) and that improve risk coping by reducing vulnerability and improving early warning systems. Similar to other communities who have developed the plans, they are also used to inform UP planning and investments. CREL did not hit the target of 600 villages because: a) the Halda River site was dropped due to the Forestry Departments parallel efforts in the Halda River who requested that CREL not support

further activities until they finalized their planning; and b) in new additional sites the climate vulnerability assessments were delayed due to the need to mobilize BCAS to mobilize and train additional staff. In addition, climate change information was disseminated among 3,189 students (2,008 girls, 1,181 boys) in 19 schools. These school events helped build awareness among the students about Climate Change Adaptation Mitigation.

Activity Year 4 Deliverable	Status
600 village adaptation and mitigation plans developed	443 plans developed. Remaining to be completed in Year 5 if budget allows

Activity 3.5 Improve biophysical condition through forest protection and improvement

CREL supported CMCs by funding selected activities described in their annual development plans through grants for improved biodiversity and ecosystems. By planting trees in encroached areas and the landscapes surrounding PAs, CREL increased wider ecosystem-livelihood resilience to climate change and reduce greenhouse gases. CREL helped communities plant mangroves as a buffer against sea level rise and salinity, including nipa palm as a source of quick growing trees for income as well as bank stabilization. CREL facilitated the FD in implementing ANR within PAs in cooperation with local communities. CREL funded protection activities (e.g., guarding regenerating areas, and community patrol groups). CREL provided training, logistical support and inputs to individuals involved in protection activities (e.g., community patrol groups).

In year 4, CREL implemented interventions were:

Mangrove Restoration

CREL restored 60 hectares' mangroves through reforestation and protection.

Assisted Natural Regeneration (ANR)

CREL facilitated ANR covering almost 520 hectares to through in situ conservation. CREL facilitated guarding through CPGs, weeding, and reducing pressure through resource substitution (growing biomass outside of forests).

Afforestation at Homesteads and Institution

CREL encouraged tree plantations and almost 15 ha areas were afforested by the communities.

Activity Year 4 Deliverable	Status
At least 30 ha mangrove and others planting, technical support and guarding for at least 310 ha of ANR.	Completed

Activity 3.6 Reduce pressure on PAs through Improved Cook Stoves (ICS) and Resource Substitution

Dependence on PAs for wood products is a major problem. People cut tree seedlings for their own use and for sale. The demand for fuel and stakes will continue, and so will pressure on the remaining forest inside PAs. As such CREL supported Improved Cook Stoves (ICS) to reduce

fuel wood consumption, promoting cultivation of wood resource substitutions, and restoring degraded landscapes with bamboo and other plants. This provided alternative sources of fuel without cutting forest in PAs and has important synergies with IR 4.

Fast growing biomass production

CREL helped local people to cultivate Dhaincha (*Sesbania* spp.) as an alternative to fuel wood and fodder collection from forests. Moreover, cultivation of betel leaf, one of the major crops in the hilly areas of Cox's Bazar region requires tree saplings to be used for staking and support posts which are mainly collected from the adjacent forests. This practice severely affects the survival of naturally generating tree seedlings, which has negative impacts for ensuring healthy, mature forests. To address this problem, CREL is promoting the cultivation of plantations of *Garuga pinnata* tree seedlings. CREL



Photo 24: Bamboo propagation

distributed tree seedlings to betel leaf cultivators of Cox's Bazar region to rapidly propagate the supply of this tree. Further, CREL conducted five batches of a one-day training on bamboo propagation and management. The training focused on bamboo propagation especially by 'Konchi Kolom' method, site selection for cultivation, commercial production, disease control, bamboo grove management and harvesting methods. There were 100 participants included 26 women and 74 men. CREL distributed 5,075 bamboo saplings among 300 forest dependent peoples to plant in their homestead which will be helpful in enrichment of bamboo bushes.

Improved Cooking Stove (ICS)

During the reporting period, CREL facilitated the installation of 1,064 ICS by partnerships between Germany's GIZ and CMCs. Further, CREL promoted a total of 417 Retained Heat Cookers (RHC) among the beneficiaries. RHC saves cooking fuel because after food has been heated to cooking temperature using the ICS, it is placed into RHC, where it continues to cook until it is done. Retained-heat cooker was introduced by CREL along with ICS since it reduces the use of traditional fuels.



Photo 25: Improved Cookstove

Stall livestock feeding training

Seven one-day trainings on stall feeding were conducted by CREL during in Year 4. The key objective of the training was to change the practices of participants to cutting fodder to use in stall feeding and end unrestricted grazing in ANR areas. Out of 169 participants, 85 were women and 84 were men.

Activity Year 4 Deliverable	Status
(i) 500 Households (non-livelihood beneficiaries) start fuelwood production – improved bamboo/shrub/biomass management practices in about 50 ha in Cox’s Bazar and Chittagong regions;	(i) Completed
(ii) At least 1,000 households buy ICS.	(ii) Completed

Activity 3.7 Improve freshwater wetland natural resource management

Freshwater wetlands are important sources of livelihood but are threatened by overfishing and degradation. They are also of high biodiversity value (for native fish spawning grounds, wintering waterbirds, and for unique swamp forest ecosystems). CREL continued support to conservation and sustainable fisheries in Hail Haor and supported similar actions in Hakaluki Haor, in collaboration with IR1 enabling policy and IR4 livelihoods support. The series of fish sanctuaries and community protected swamp forests (which act as fish nursery grounds when inundated in the monsoon) continued to maintain sustainable fish catches. CREL undertook the following activities in Year 4.

Activity 3.7a Improve fisheries management.

During this period, CREL handed over six fiber reinforced plastic tanks to the Department of Fisheries for use in the Halda River by spawn collectors to improve the hatching rate and survival of wild caught carp fish eggs. CREL also started fish catch monitoring at Goyain River adjacent to the Ratargul swamp forest. The CBOs supported by CREL continued to protect a series of sanctuaries in Hakaluki Haor and the permanent sanctuary (Baikka Beel) in Hail Haor, with 12 guards supported from CREL grants and Upazila level grants (from MACH endowment). Three dialogue meetings were conducted with the fisher community, boatmen and LGI Officials on laws related to fish capture and use of fishing nets, boats etc. aimed at improving compliance with conservation rules.

Activity 3.7b Improve biophysical condition of freshwater wetlands.

Swamp Plantation

In Year 3, CREL undertook swamp plantation at Hakaluki haor and planted 102,550 seedlings of Hijal (*Barringtonia acutangula*) and Korocho (*Pongamia pinnata*). With approximately 95% survival rate of these plantations, they add life to swamp ecosystems. This was further expanded in Year 4 by an additional 90,000 seedlings. CBOs continued to support protection of these swamp forest areas engaging eight guards and two hired boats. With these efforts, Hakaluki Haor ecosystem is restoring to its previous state with shades of green and adorned with an increase in birds and fish diversity.

Fish sanctuary

Additionally, five sanctuaries in Hakaluki Haor were marked with bamboo with red flags to protect sanctuaries from illegal fishing.

Awareness creation activities

To generate awareness of local community people on wetland resource conservation, sanctuary management and the “Fish Act”, three mass gathering programs were organized with the cooperation of CREL project at different places of Hakaluki Haor site. Programs were scheduled with sports competition, documentary presentations and open discussions between officials and VCG members. Total participants were 800 (700 men, 100 women). As a recognition for the successful management of Koyerkona and Baiya Beel Fish Sanctuary, Halla and Judistipur VCG were awarded for their efforts on the occasion of Fish Week-2016 by their respective Upazila offices.

None of these activities were in quarter 4, except for the Fish Week awards.

Activity Year 4 Deliverable	Status
Overall: 17,000 households benefited from sustainable increases in fish catches (including spawn catches) and sustainable management in Hakaluki Haor, Halda River and Ratargul.	a) No change, achieved in PY 2 and 3 for Hail and Hakaluki
a) All fish sanctuaries in Hakaluki Haor and in Baikka Beel are functioning well. RMOs and VCGs promote and coordinate sustainable practices (e.g. closed seasons, ban on dewatering). Based on co-management bodies, District and Upazila Administration promotes sustainable practices among leaseholders.	
b) (i) About 30 ha swamp forest restored/planted for improved biophysical conditions, (ii) 360 ha restored/improved biophysical condition of wetlands through wetlands re-excavation and bunds.	(i) Completed (ii) In progress

Activity 3.8 Fisheries and wetland conservation in coastal areas

Coastal fisheries are important sources of livelihood but are threatened by overfishing. Coastal PAs are of international significance for wintering water birds and for nesting marine turtles. CREL started to orient coastal communities around and within PAs and ECAs on appropriate measures to achieve sustainable fisheries and on the need to end hunting of wildlife. At the same time CREL and the CMOs prepared plans and took actions to improve coastal wetland areas. Through consultations with local fishing communities and government field officials, CREL identified locations within some of the coastal sites to become sanctuary areas.

Activity 3.8a Improve fisheries management.

Coastal fisheries are of high importance, but so far none of the biologically significant coastal sites where CREL works has fisheries management as a primary management objective. Planning (Activity 3.3) enabled CMOs to identify further areas where in Year 4 onwards they will take up conservation and sustainable use practices, which CREL supported. For the larger coastal wetland landscape of five sites these included restrictions on use of harmful gears/practices, local closed seasons for fisheries, and protection patrols. In the Sundarbans, use of poisons for fishing is a serious threat to the ecosystem and to consumer health, CREL promoted effective controls on this by helping CMCs to identify the main areas affected, chemicals used and communities involved in poison fishing, and then targeted awareness activities and livelihood diversification there.

In year 4, CREL completed the restructuring and strengthening of a fish sanctuary in Muktariala Khal in Nijhum Dweep NP covering 10 hectares. CREL organized three focus group discussions

(FGD) with crab collectors at the Munshigonj site in the Sundarbans with the objective of identifying crab hot spots for establishing two sanctuaries to address issues of the over exploitation of crabs.

Activity 3.8b Improve biophysical condition of coastal wetlands.

To complement fisheries management, location specific measures to protect and improve biophysical conditions are needed. In Year 4, CREL assisted CMOs to take actions such as identify and demarcate biodiverse no-go/no-take areas (e.g. fish sanctuaries, and mudflat - beach sanctuaries to protect waterbirds and turtles), habitat protection and patrols, arrangements and patrols to relocate turtle nests to safe zones, associated awareness campaigns, and erecting signage. Outside of the biologically significant areas, this activity facilitated advice and habitat restoration in derelict ghers (shrimp farms) to restore them for common natural resources or agriculture according to feasibility and the interests of landowners.

Sand dune and Keya plantation

During this period around 2.72 ha of sand dune vegetation plantation was planted. This was a follow up to the PY3 13.86 ha sand dune vegetation plantation (8 ha under Cox's Bazar-Teknaf Peninsula and 5.86 ha at Sonadia ECA). In addition, a total of 6,200 Keya seedlings were planted in St. Martin's Island which covered around 2.48 ha.

For restoring the coastal barriers with USG assistance, Winrock and its partners are working to stabilize natural sand dune barriers that protect infrastructure and communities along the coast of the Bay of Bengal. CREL's team continued its work refurbishing sand dune barriers in Year 4 by planting 6.86 hectares of various creeper species (Keya and Nishinda) on Pecherdwip at Cox's Bazar-Teknaf Peninsula ECA and Sonadia ECA. Additionally, to protect the marine turtle, VCGs collected 10,503 turtle eggs laid in beaches that they protect. From the eggs collected, 9,100 turtle hatchlings were safely released into the sea.

In addition, CREL worked in Cox's Bazar and St. Martin Island to raise awareness of unsustainable fishing methods and harmful gears, and of the importance of protecting coral and other crucial species. CREL also promoted trash collection and met with VCGs to deliver conservation awareness messages. A total of 43 signs were placed at important locations in Sonadia ECA, along beaches in Cox's Bazar-Teknaf Peninsula ECA and on St. Martin's Island ECA to deliver the message that marine turtles play an important role in marine ecosystems and that Bangladesh has adopted national and international protocols to conserve turtles.

Activity Year 4 Deliverable	Status
Overall: 30,000 households benefit from increased catches of fish and other coastal resources.	
a) Sustainable fishing practices (e.g. bans on harmful practices and/or closed seasons and/or reducing poison fishing) promoted within 5 coastal areas (Sundarbans ECA, Tengragiri, Nijum Dwip, Sonadia, and St Martin's)	a) In progress
b) At least 200 ha of coastal wetland biophysically restored and /or improved (mainly protected locally as sanctuaries and under biodiversity protection measures, but may also include restoration of derelict ghers (shrimp farms)).	b) In progress

Activity 3.9 Identify and facilitate funding for CMOs.

During FY 2015, almost all CMOs developed a resource mobilization strategy, priorities for climate resilient development/adaptation, and an annual development plan for Bangladesh FY 2015-2016. In Year 4, CREL continued to work on developing partnerships with private enterprises on behalf of CMOs, share information on potential companies, foundations, and NGOs with CMOs, and assist them in preparing proposals. In follow-up to a workshop in Cox's Bazar during the preceding quarter, CREL organized two regional level meetings at Chittagong and Khulna with private sector companies to channel funds to CMOs. Following the workshop in Chittagong, proposals were submitted by three CMCs to private companies for funding. CREL will continue its efforts to facilitate CMOs to get fund from private companies and government agencies, and will organize advanced training on proposal writing for selected CMO leaders.

Activity Year 4 Deliverable	Status
Established plan and priorities for CMOs that do not have scope for collecting fees, actively seek out funding, leverage commitments	In progress: 3 CMO proposals to private companies

Sub-IR 3.1. Increased Sustainable Financing of CMOs

Activity 3.10 Secure Revenue and Entry-fee Sharing

CREL has been working in Years 2 and 3 to secure revenue and entry fee sharing for the appropriate forest CMCs. By the end of Year 3 the project has made progress for four CMCs (Kaptai, Karnafully, Shilkhali, Khadimnagar) and three PAs. Unfortunately, the Kaptai site was dropped due to political disturbances that prevent operations there and CREL discontinued support to Kaptai and Karnafully CMOs, based on USAID concurrence. CREL continued to work on introducing an entry fee system with a target of 15 CMCs and nine PAs (including those noted above) where entry fees were not collected, completing related physical works, printing of tickets, and training of CMCs. Policy reform activities under IR1 are expected to advance revenue sharing from those sites where FD currently collects entry fees but does not share with the CMCs.

In addition, CREL inherited five forest CMCs that collect visitor entry fees and have agreements for receiving a share of the revenue. However, funds were not released in an efficient and timely manner. For example, CMCs receive funds at the end of the year or less than the 50% they expected. Under IR 1, the Forest PA (Co-Management) Rules 2016 are expected to streamline some of the processes IR 3 facilitated the implementation of these reforms in all of the target PAs when they are approved (15 CMCs including five with inherited entry fee systems). In addition, one wetland CBO already collected entry fees from visitors to its sanctuary (Baikka Beel) with previous endorsement from the Upazila administration, and the scope for two VCGs in Hakaluki Haor to charge entry fees (which are under DoE oversight) was pursued.

CREL completed 85 small-scale construction activities in Year 4 that will provide help attract and manage tourists and associated revenue. An additional 130 activities are planned for Year 5. In parallel, our support to adoption and implementation of the policies and procedures mandating revenue sharing should increase CMO income.

Table 2: Revenue collection from different PAs during the 2015-2016

Name of the CMO	Number of total visitor	Collection from Visitor entry fees (BDT)	Collection from others (Picnic spot, shooting etc.) (BDT)	Total Collection (BDT)
Lawachara NP	153,203	3,027,200	269,315	3,296,515
Satchari NP	40,651	654,210	78,290	732,500
Rema-Kalenga WS	853	15,710	500	16,210
Hail Haor	4,983	120,320	0	120,320
Chunati WS	1,483	10,895	50	10,945
Teknaf WS	890	22,160	7,450	29,610
Sarankhola	879	443,805	0	443,805
Chandpai	88,131	5,988,050	0	5,988,050
Dacope-Koyra	12,476	2,740,220	0	2,740,220
Munshigonj	21,841	996,540	0	996,540

Activity Year 4 Deliverable	Status
Established entry fee collection and revenue sharing in 15 CMCs in forest PAs; improvement of existing systems with five (5) forest CMCs.	In progress

Activity 3.11 Leverage support for sustainable climate resilient NRM and livelihoods

CREL acts as a broker on behalf of the co-management movement in Bangladesh with national level agencies and projects and with potential international sources of support. In Year 4, CREL focused on proposals on behalf of CMOs at regional and national level, and on identifying partnerships. Some of the significant outcomes in Year 4 include collaboration with the World Bank financed Strengthening Regional Cooperation for Wildlife Protection Project (SRCWP) contributions worth BDT 1.5 million to draft sub-regional FD management plans in the Sundarbans, and the microfinance and infrastructure development initiative of Dweep Unnoyon Sangstha worth BDT 16.9 million to provide credit to CREL livelihood beneficiaries. In line with this diversity of potential leveraged support, CREL worked to ensure that local leveraging of support and actions complementary to co-management are properly documented.

Activity Year 4 Deliverable	Status
Agreements with other programs, projects, donors, agencies in support of this for CREL working regions and landscapes	In progress

4.4 Improved and Diversified Livelihoods that are Environmentally Sustainable and Resilient to Climate Change (IR 4)

The objective of this IR is to increase incomes and livelihood choices of poor resource-dependent households in communities that live near wetland, coastal and forest areas while motivating them to conserve resources in order to better withstand climate change impacts. In Bangladesh, the most sensitive ecosystems are being destroyed due to pressures from very poor resource-dependent local populations who over-extract for personal use and/or livelihoods. Encroachment is also a problem, with some populations living within protected forest areas.

In order for CMOs to be able to protect and restore forests and wetlands, over harvesting needs to stop. CREL addresses this problem by working with resource-dependent communities to identify market-based livelihoods that provide incentives for preserving natural resources (e.g., ecotourism, payment for environmental services, private sectors initiatives) or alternative livelihoods (i.e., agriculture or other rural-based enterprises). CREL's life of project target is to diversify the livelihoods of 350,000 natural resource-dependent people through sustainable income generation. This target is revised from 500,000 people as per recommendation from Mid-term Evaluation based on what is possible to reach in the project. Since Year 2, CREL has been providing technical support to people that reduces dependency on natural resources and helps them move into higher-value agricultural production.

In Year 4, CREL increased the livelihood capacity of more than 9,000 people who are now undertaking entrepreneurial activities that will increase their incomes.

Key Indicator	Year 4 Target	Year 4 Result
# people with increased economic benefits derived from sustainable NRM in conservation as a result of USG assistance	125,000	148,420 (F-72,726)
a) Income increase of livelihood beneficiaries	62,500	51,227 (F-25,101)
b) Increased natural resource beneficiaries	62,500	97,193 (F-47,624)

Key Accomplishments

In FY 2016, CREL achieved:

- 51,227 people with increased income of 1.73 Million USD during project Year 4
- 9,493 farmers were trained on Climate Resilient Agriculture
- 1.39 Million USD leveraged from private sector, other donor funded project, partners and Government of Bangladesh.

Sub-IR 4.2/ Increased Adoption of Environmentally Sustainable and Climate Resilient Livelihoods

Activity 4.1 Strengthen climate-smart agriculture to increase income for selected natural resource dependent households.



Photo 26: Hands on training in a demonstration plot.

In Year 4, CREL rolled out a modified CSA demonstration strategy that focuses on crops that have the highest potential for increased productivity and technologies that are successful given current weather patterns. 61 CSA demonstration plots were established throughout the four regions of the project in Q4. To expand CSA and generate income for the CMC, in Q4 key messages on signs leave room for paid advertisements for CSA services such as seed companies. These firms have found the signs to have a great potential to disseminate key farming knowledge, and their products, among the farmers. CREL's approach creates a private-sector driven

approach to climate-smart agriculture that connects market services with farmers wanted to adapt their techniques. Over 6,000 signboards are placed with the key messages in all four regions of the CREL project.

In addition to these demonstrations, CREL completed the training of the resource dependent population. In the Year 4, a total of 9,493 farmers were trained on climate resilient aquaculture, horticulture and livestock. Thus CREL completed a total of 59,391 farmers trained to achieve the income target and technology adoption. One of the major targets of the project is to increase the income of the households through the livelihood interventions, which was achieved through this training and demonstration.

Activity Year 4 Deliverable	Status
# Train 8,500 farmers on Climate Resilient Agriculture	Completed
# Establish 61 Climate Smart Agriculture Demonstration	

Activity 4.2 Strengthen and expand the Local Service Provider (LSP) to increase information and other services to NR dependent households.

LSPs have played a large role in CREL's success in providing training, access to high quality inputs and technical information to farmers. In Year 4, CREL began a series of workshops with NGOs, private sector and CREL staff to identify ways to strengthen the LSPs in CREL. Through this, CREL will further strengthen channels for LSPs to reach more farmers to ensure viability of the LSPs and improved and equitable access to quality information, inputs and markets. CREL

has completed most activities related to the preparation of the strengthening of LSPs. In the upcoming two quarters of year 5 CREL will complete the task.

Activity Year 4 Deliverable	Status
Data collected and analyzed on trained LSPs	Completed

Activity 4.3 Identify and strengthen non-agricultural employment for natural resources users including landless households through private sector engagement.

Livelihoods for non-agricultural and value added processing represent significant opportunities to incorporate landless and marginal households into the private sector marketplace. In the Year 4, CREL and Pebble staff trained and additional 1,000 women and another 800 women are now in the two months training that will finish in November 2016. In total, over 3,100 producers of Pebble toys earned BDT 1,632,684 during the year. The Pebble Child collaboration with CREL has been a very successful initiative with 3,329 beneficiaries earning a total of BDT 4,299,547 from October 2014 to September 2016.



Photo 27: Women working to produce high quality toys for the Pebble Child

In Year 4, CREL signed an MoU with the Community Based Tourism (CBT) Bangladesh to train 120 women Artisans to produce high quality souvenirs for tourists. CBT will place the order as per their demand and will supply all raw materials. These artisans will produce these items as per the model provided. CBT is also working with Bangladesh Parjatan Corporation to promote locally produced handicrafts in all tourist areas of Bangladesh.

Activity Year 4 Deliverable	Status
#Train 1,800 women producer and link them with the market	Completed

Activity 4.4 Increase access to finance and link beneficiaries to credit.

In Year 4, CREL continued to work with micro-finance organizations and the private sector to help the poor in proposed value chains and alternative income generation opportunities. CREL facilitated the expansion of savings and loan group formation among the beneficiaries. CREL also identified other development projects (e.g. SRCWP financed by World Bank worth BDT 1.5 million) to create links with CREL beneficiaries. BDT. 16.9 million of microfinance support to CREL beneficiaries was provided by Dweep Unnoyon Sangstha (DUS). CODEC linked a specialized loan of BDT. 0.5 million to VCF members of Himchari sites to support income generation from different livelihood activities. The Midterm Evaluation noted that the targets for leveraging funding for CREL were overly ambitious and the amounts leveraged to date, and

during this year, are largely consistent with the adjusted leveraging target that will be set with USAID at the beginning of Year 5.

Activity Year 4 Deliverable	Status
# A total of 5 million USD (jointly with activities 4.5) is leveraged	1.39 Million USD is leveraged

Activity 4.5 Promote Private sector engagement, leveraging and fund raising.

In Year 4, CREL worked with many different agencies, foundations and, private companies to leverage resources for the communities to enhance sustainability and bridge the gap between development initiatives and private sector. Examples include the Pebble Child partnership and GIZ collaboration described above. Additionally, the Arannyak Foundation, has provided input support totaling an amount of BDT. 2.75 million CREL beneficiaries for livelihood intervention in Chunati WS, to reduce resource dependency.

In a joint initiative CREL and Hathay Bunano Proshikhan Society (HBPS) has produced a documentary to showcase handicraft interventions (pebble toys) in improving livelihood status and to reduce resource dependency. HBPS provided BDT. 281,200 for this, as well as BDT. 250,000 to renovate the Chunati Visitor Interpretation. The Strengthen Regional Cooperation for Wildlife Protection (SRCWP) program provided BDT.1.5 million worth of livestock training and distributed of cattle to 150 beneficiaries of Teknaf, Shilkhali, Whykong and Inani PAs to reduce resource extraction and improve livelihoods. Standard Chartered Bank offered Agro-Award to support Subsistence Market Group among the CREL beneficiaries to further expand their livelihoods activities in a group approach, with awards of BDT. 1,100,000. Total cost share by the partners' organization in CREL project implementation in NRM is calculated at BDT. 32,150,751.



Photo 28: Winners of Standard Chartered Agro Award 2016

To enhance field level activities for NRM, in Quarter 4 the Forest Department and the DoE paid the value added tax (VAT) and other costs for 11 vehicles for FD and 2 for the DoE totaling BDT. 24,523,759 and BDT. 4,459,678, respectively.

Activity Year 4 Deliverable	Status
# A total of 5 million USD (jointly with activities 4.4) is leveraged	1.39 Million USD is leveraged

Activity 4.6 Conduct Financial and entrepreneurship literacy training focused on climate-Resilience.

CREL started the final stage of the Financial and Entrepreneurship Literacy Training program with 105 centers in four location of the project. A total of 2,100 women are participating in this 7- month long program. Since the inception of the project, CREL trained a total of 8,300 people (women 7,974) through 419 FELCs.

Activity Year 4 Deliverable	Status
# List of the trained people (Year 4 target 2,000 people)	Completed

Activity 4.7 Capture and document impacts, successes and lessons learned.

This year continued the process of documenting and disseminating project successes and innovation activities to a wider audience to scale the uptake of activities to communities outside the targeted landscapes. The documentary “Knitting the Future” was produced and distributed by CREL and placed on the USAID Facebook page, the Forest Department website, the Winrock International website, YouTube and the Pebble website.



Photo 29: Filming the documentary “Knitting the Future”

Success stories of LSPs were collected from all regions to make a documentary on the key factors behind LSP successes. This information will be documented and disseminated to make a larger and more sustainable impact on LSP provided services in the community.

Activity Year 4 Deliverable	Status
#Documentary published on different websites/Channel	Completed

4.5 Cross-cutting Activities



CREL’s portfolio of cross cutting activities work with and around the technical components of CREL to facilitate the successful and cost-effective implementation of the project and to foster sustainable impacts and benefits that accrue equitably among the project’s stakeholders. CREL’s cross-cutting activities help to properly target and scale program activities and to adaptively

manage land identify program successes and shortfalls while implementation is ongoing. CREL's six Cross-Cutting Activities, which interact in and between the four IRs and each other, are Gender, Grants, Communications, Monitoring & Evaluation, Environmental Monitoring and Construction.

Gender

Greater equality and women's empowerment are essential for the health and sustainability of ecosystems and communities, creating a basis for greater resilience, more effective engagement, and better results. CREL's commitment to gender equality, women's empowerment, and eliminating all forms of discrimination and gender-based violence (GBV) is expressed in policies, approaches, activities and outputs.

CREL continues to achieve good results by applying a "gender approach" that has mainstreamed gender and equitably engages women and men in livelihood initiatives and resource management institutions. Gender representation follows a pyramid structure. At the bottom tier (VCF level) women's representation is reaching more than 60% in general members as well as 55.75% office-holder positions. Women's representation is at 48.5% at the mid-tier (PF level general members) and 42% in executive bodies. At the CMC level it is near 20%. Most of the Sub-committee/PIC chairs are women. This indicates that women still lag behind in holding top level leadership and decision-making positions.

In terms of livelihoods, more than 74% of women have been involved in project activities (not including livelihood initiatives focused specifically on women, such as Pebble buyback, tailoring, and cap making). This is increasing women's economic empowerment, reducing dependence on natural resources and reducing gender inequality /GBV within the households and the wider community. CREL institutionalized gender to address and monitor gender equality and women empowerment issues by creating and functionalized Gender Focal Persons at all levels from VCFs to Regional bodies.

Gender 1. Institutional strengthening of gender mainstreaming

During Y4, a one-day refresher workshop was facilitated in each region for a total of 135 CREL staff on the CREL Gender strategy/approach in NRM, climate change adaptation and orientation on new materials for Y4 activities. Workshops utilized high-quality and innovative communications products to increase staff knowledge and capacity for gender mainstreaming including discussions on challenges and solutions to reduce GBV and natural resource extraction. Workshops also provided practical guidance on using a transformative approach to promote gender equity by engaging both men and women in changing harmful attitudes and behaviors, and transforming institution rules, norms and practices that create or reinforce inequalities.

CREL held quarterly meetings for project gender focal persons in all four regions and 25 sites. Meetings focused on strategies to increase inclusion of women in



Photo 30: Refreshers workshop in Sylhet region

CMOs/RMOs/VCGs, women in leadership roles in CMOs/RMOs/VCGs, self-confidence for women leaders, spouse meeting conducted, gender messaging, implementing gender action plans, and linking private, GoB, and NGOs at the regional and Union Parishad levels to CREL gender initiatives to ensure sustainability. To this end, CREL successfully prepared two MoUs in the Chittagong region with private sector actors. An MoU with A.K. Khan Group and CODEC will provide micro-credit and support health services for women. An MOU with Dwip Unnayan Sangsta will connect community level craftspeople with markets with a focus on women and adolescents. In the Sreemongol region, CREL organized three meetings at the site level with suitable partners, made resolutions and signed by CREL site officers and concern department of GO/NGOs that is treated as MoUs. In these workshop GO/ NGOs agreed to provide support and services in the field of IGA, awareness on importance of gender equality and women empowerment in NRM and climate change adaptation that reduced GBV and natural resource extraction, reproductive health and nutrition, leadership training, inputs for health and family planning etc.



Photo 31: Quarterly Gender Focal Persons meeting in Cox's Bazar

Activity Year 4 Deliverable	Status
Workshops and meetings conducted to promote institutional strengthening for gender mainstreaming in CREL activities and partner organizations.	Four regions have completed 4 workshops. 94 gender focal person (GFP) meetings and 5 MoU signed with GO/NGOs for leveraging their support and services to continuing CREL Gender activities after phase-out CREL.

Gender 2. Gender Mainstreaming Training in NRM and Climate Change Adaptation

In Year 3, CREL provided gender mainstreaming training to CMOs and GoB officials on issues that affect access to and control over resources, ecosystems, and livelihoods and that teaching methods are accessible to women through IR 2. In Year 4, CREL built upon these trainings to ensure the plans and activities of CMOs are gender sensitive and based on empowerment of the disadvantaged including women. In collaboration with activities 2.3, 3.2 and 3.3, CREL's gender focal points advised, mentored and reviewed all CMO multi-year and annual planning processes and plans to ensure that they are gender sensitive, fairly reflect the priorities of women and men of different social statuses, and take initiatives to address gender based constraints. CMO office bearers and members also kept gender issues in the agenda of their regular meetings.



Photo 32: Gender mainstreaming in NRM and CC adaptation training in Sylhet

The training developed in Year 3 was conducted for new CMOs and those with reformed membership. The results of this training supported CMO competencies to address gender-based constraints and promote gender equality and women’s empowerment in their organizations and reduce GBV and natural resource extraction. This training was also extended to local officials to improved their knowledge and understanding of gender equality and women empowerment in NRM and climate change adaptation thereby improving their ability to ensure gender considerations in CMO plans. Gender training details training for Y4 are given below:

Gender Mainstreaming in NRM and climate change (CC) Adaptation

Name of Region	# of Training Events	Men	Women	Total
Khulna	1	15	5	20
Sylhet	4	65	47	112
Chittagong	0	0	0	0
Cox’s Bazar	1	14	12	26
Total	4	94	64	158

Activity Year 4 Deliverable	Status
All CMO multi-year plans and ADPs are gender sensitive; local-level action plans developed for gender equality and women’s empowerment; gender mainstreaming training in NRM and climate change adaptation completed.	Completed

Gender 3. Workshops to build self-confidence of newly appointed women leaders of CMOs including PFs.

In Year 4, CREL held trainings to build the self-confidence of newly appointed women leaders in CMOs and in PFs including VCF office bearers and CMO Gender Focal persons. CREL held workshops in 23 sites for more than 610 newly appointed women leaders. The training helped create a “level playing field” for newly appointed women leaders by increasing their knowledge, public speaking skills, and confidence so that they can raise their voices in meetings, seminars, public meetings and workshops in favor of women – and especially poor women, meet with local government and government personnel to claim their rights, carry out the organizational responsibilities discharged to them, and exercise their leadership for the conservation and protection of natural resources.



Photo 33: Workshop on building self-confidence of women leaders in Chittagong

One example of such a level playing field was seen from six new women CMC office bearers in Chittagong. After receiving training, they were raised their voices on gender inequality situations and worked with CMC management to make plans gender sensitive and develop a gender action plan. They presented their situation at a press conference articulating a story of struggle for dignity, empowerment and leadership.

Activity Year 4 Deliverable	Status
Workshops held and reported; confident and competent women leaders in all CMOs including PF.	Completed

Gender 4. Reduce gender-based constraints and gender-based violence within wider communities in CMO landscape areas.

CREL complements the activities described above activities to end gender-based constraints, violence and inequality. This requires a whole-household approach that is mutually-supportive and transformative and includes the sensitization of spouses as well as the broader community. In Year 4, CREL held 145 spouse meetings reaching 6,954 men and women to raise awareness, change behavior and end GBV.



Photo 34: Men women both are taking oath to remove gender- based constraints/violence/inequality at spouses meeting in Khulna.

Gender 5. Design and disseminate public awareness materials to improve understanding of gender-based issues and compensating actions.

CREL developed innovative public awareness materials including issue-based billboards and posters in collaboration with other IRs scale an improved understanding and awareness of gender-based issues.

In Year 4, CREL celebrated and had media coverage for International Rural Women Day with rallies, presentations, discussions, women-operated livelihood activity demonstrations and check handover ceremonies with social forestry participants. Individuals participated from VCFs, CPGs, CMCs, students, forestry agents and the media. The CREL office in Dhaka celebrated the day with speeches, compelling videos and personal 2030 gender equity commitments. CREL upgraded its flipchart training curricula to highlight gender vulnerabilities in NRM and climate change adaptation. Gender sensitive messaging were also developed for signs for the livelihoods demonstration program. CREL also developed a short documentary video on women community patrol groups which was shared with the Forestry Department, CREL partners and USAID.

Activity Year 4 Deliverable	Status
Gender-sensitive public awareness materials developed and distributed.	Completed

Gender 6. Cross-visits for women CMO leaders and FELC participants.

In Year 4 CREL organized cross-visits for 20 CMO women leaders from Cox's Bazar, Sreemongol, Sylhet and Cox's Bazar to learn about CREL supported livelihoods and FELC work successful gender-equitable development is taking place exemplified by women's economic empowerment, shared decision-making and equal division of labor.

Activity Year 4 Deliverable	Status
Cross-visits conducted in every region and reported.	Two regions conducted cross visit and reported there were 20 women leaders attended.

Gender 7. Gender scorecard study on women's empowerment.

CREL conducts the Gender Scorecard survey before and after FELC training, which draws on five domains identified in the Women's Empowerment in Agriculture Index (WEAI), concentrating on areas/sectors/arenas most relevant for assessing gender equality and women's empowerment outcomes from CREL. The five domains are: production, resources, income, leadership, and time allocation. Baselines surveys were conducted in Year 3 with new FELC participants. In Year 4, CREL conducted an impact analyses to measure the impact of the women's empowerment resulting from the FELC program. Significant improvements were documented in:

- Women's inputs in productive decisions but not yet equal to men.
- Women's ownership of assets and access to services increased remarkably reflecting increased access rather than ownership
- Women's control over and use of income
- Women's leadership and decision-making
- Women's time allocation to agriculture and community activities
- Men's participation in household activities indicating a more equitable sharing of work within the household leading to potential reductions in women's workload and improvements in women's health which are considered pre-conditions for family peace and development.

Activity Year 4 Deliverable	Status
Gender scorecard used for measuring progress on women's empowerment.	1 st round baseline with impact survey and analysis completed. Detailed report to be prepared by CREL M&E in October, 2016. 2 nd round baseline completed; impact analysis and preparation of report by December 2016.

Communications and Outreach

Communications cross-cuts all of CREL's IRs, promoting awareness and supporting the implementation of activities. In Year 4, the Communications Team focused on promoting the impact of CREL's successes, and policy events, establishing the profiles/brochures of CMCs, engaged media in reporting on key events and supported the sensitization of youth to environmental issues in protected areas. The communications team developed, documented and disseminated success stories and other communications materials that highlighted successful CREL approaches with a much greater emphasis and success in getting CREL successes for a presence in USAID communications.

COM 1. Events and products to raise understanding and awareness in support of policy reforms/demand (national/regional levels) - in support of IR1.

CREL supported national and regional events, campaigns and communications products to increase awareness of and the need to implement key policies in support of IR1.

Key Accomplishments

- Arranging for a meeting between the CCF and journalists at Himchari National Park in November 2015 to highlight the CCF's work on policy issues including co-management, eco-tourism, conservation, and CPGs which was broadcast on national television.
- Launching a social media campaign to celebrate International Day of Forests in collaboration with the Forest Department which was viewed more than 400 times on YouTube, featured on FAO's website, and used by the Forest Department as well as producing a newspaper supplement and producing 600 posters for the Forest Department.
- Supporting the FD and CMCs in organizing 20 community events to increase community awareness and support for forest conservation efforts.
- Hosting a daylong dialogue on "Sustainable Financing for Co-Management Organizations in Bangladesh" in Cox's Bazar in March with an extensive exhibition including 23 posters and infographics to tell the story of CREL across seven project themes. At the same event CREL arranged a press briefing by the Chief Conservator of Forests (CCF) with journalists at Cox's Bazar focused on the emerging key issues from the Dialog which was featured in 26 national and local media outlets. CREL also concurrently supported CMCs to hold smaller, local events at seven sites in three regions on the same theme.
- Coordinating a workshop on "Natural Resource Management and Environmental Law and Policy" in August 2016 in support of "Ecologically Critical Area (ECA) Management Rules and Protected Area Management Rule" reform and adaptation, attended by more than 50 high level Government Officials from Ministry of Environment and Forests, Bangladesh Forest Department, Ministry of Law, Justice and Parliamentary Affairs and Ministry of Land. CREL organized an exhibition of policy related infographics and success stories for these participants as well as a field trip on turtle conservation.
- Arranging a high visibility handover ceremony in September 2016 for the re-excavated Kellar Pukur pond and associated pond sand filter to the community of Purba Kalinagar, Munshiganj, Satkhira by Mr. Yunus Ali, Chief Conservator of Forests of Bangladesh and Mr. Paul Sabatine, Deputy Mission Director of USAID. More than 500 community members and high officials of the Bangladesh Forest Department, representatives of local government participated in this event.

Activity Year 4 Deliverable	Status
Materials and events developed, focusing on specific issues related to wetlands, ECAs and PAs; regional and national level events organized for policy support; Audio-visual developed.	Completed

COM 2. Design materials and events to support CMOs for fund raising, public relations, promoting their messages - in support of IR2 (CMO capacity-building) and IR3.

CREL is strengthening co-management in biodiverse landscapes by improving the ability of local institutions (CMOs) to plan, protect, and restore ecosystems, including strategies for increasing preparedness and resilience to climate change. To sustain themselves CMOs need to

mobilize resources as well as communicate their messages, priorities and activities. As part of this activity, CREL:

- Supported 16 CMCs to populate their own Facebook pages in Q4 which have been uploaded with 100 images and which have received more than 500 posts.
- Developed two short video documentaries focused on: 1) women community patrol group members portraying their dedication and willingness to protect Bangladesh's forest which has been uploaded in YouTube and widely shared by Bangladesh Forest Department, Winrock International and CREL partners <https://www.youtube.com/watch?v=knFNJaKPOjA> ; and 2) engaging women in conservation through private sector engagement reflecting how this results in enhanced conservation in of natural resources. This documentary has been widely shared by USAID Bangladesh, Winrock International, Bangladesh Forest Department through their website and Facebook pages and other stakeholders. <https://www.youtube.com/watch?v=nWzlet0A-dl>
- Continued its popular outreach event “Jungle Walk” engaging university level youth in 4 jungle walks involving over 300 university level students in conservation by means of taking them visit nearby forests PAs to learn about biodiversity, natural resource management and their own roles in conservation.

Activity Year 4 Deliverable	Status
Communication materials produced; events organized to publicize or convey messages of co-management organizations; support to social media materials.	Completed

COM 3. Signage and interpretive materials for PAs/project sites - in support of IR3.

CREL is supporting PA tourism by better informing and educating visitors and local communities on the importance of these high biodiversity sites, co-management arrangements and approaches to climate resilient ecosystems by means of high quality signage, interpretive displays, brochures and trail guides. In Year 4 CREL has:



Photo 35: Prototype of DOI signs for PAs

- Developed 65 signs with information on climate smart agriculture to inform people about technologies which will help them mitigate climate impacts on agriculture.
- Collaborate with USAID and the United States' Department of Interior's National Park Service by designing three templates and coordinating for their production in the United States (USA). Total of 209 signs will be placed with CREL support in PAs in first quarter of Year 5. DOI is leading the production of these signs in the USA.
- Installed 16 signs to increase awareness about ECAs in the Southwest region of the country in Q4 to support communities with their roles in ECA conservation.
- Supported CMOs to install 13 signs providing sanctuary information, conservation and sustainability messages at entry points to PAs focused on resource extractors.

Activity Year 4 Deliverable	Status
Signs and interpretive materials in-situ for PAs, including at key entry points of natural resource extractors.	In progress

COM 4. Communication products to promote eco-tourism - in support of IR4.

CREL is helping CMOs generate financial resources to sustain their planned conservation activities. Tourists offer one potential revenue stream through visitor entry fees, purchasing services or goods sold by CMOs and tourism related enterprises that share income with the CMOs. CREL Activity 3.10 and Grants 1 established entry fee systems and provide improved basic infrastructure, CMOs need to promote their sites and facilities in collaboration or partnership with local tourism businesses. In Year 4, CREL:



Photo 36: Banglanews24 on CREL

Developed brochures and leaflets on eco-tourism opportunities in all CREL regions arranged journalist visits to these areas. Partnered with a popular online news portal, Banglanews24.com, for a weeklong campaign for the Northeast Region called “*Bochor Jure Desh Ghure: Sylhet Porjoton*” (Round the Year, Round the Country: Sylhet Tourism). This campaign promoted tourism in the region divided into three parts: prospects of eco-tourism in different places in the Northeast region of Bangladesh; a discussion with relevant stakeholders; and consultations with and presentation by the Minister of Civil Aviation and Tourism Bangladesh. Additional materials will be developed in Year 5.

Activity Year 4 Deliverable	Status
Communication materials produced, e.g., success stories, impact stories, newsletters, weekly briefs, special briefs, photo stories, infographics, one pagers, posters, postcards, trail brochures, PA maps, CMC profiles, component brochures, captioned photos, videos, events organized to promote ecotourism and orientations.	Completed

COM 5. Products and events to share knowledge, successes and lessons from CREL (cross-cutting, also linked with M&E).

In Year 4, CREL continued to:

- Share quarterly performance monitoring reports with USAID and monthly newsletters with CREL partners, government, USAID, universities and other organizations working in the development sector.

- Distribute a wall and desk calendar documenting CREL achievements for circulation among CREL partners, government, USAID, universities and other organizations working in the development sector.
- Wrote and disseminated 52 success stories highlighting CREL's work with USAID, GoB and Winrock
- Collaborate with media on over 300 news reports featuring CREL activities and achievements including successes with artificial nesting of the Cotton Pigmy Goose, the development of the Hakaluki Haor Management Plan and wildlife conservation stories from Nijhum Dwip and Tengragiri.
- Share knowledge and lesson learned via a weekly brief to USAID which USAID posted more than 20 posts on their social media pages.
Write seven CREL stories and share 3 photo stories on bird monitoring, turtle hatcheries and local service providers that were featured on USAID's Biodiversity and Climate Change Newsletter.
- Develop seven stickers for distribution in CREL communities to scale key gender messages.
- Observe major international and national conservation-related days and weeks across all four working regions through diversified events, discussion meetings, rallies, fairs, essay and drawing competitions, interactive popular theatre shows, tree plantings, sapling distribution, book launching and cultural program engaging over 20,000 people including government officials from the Forest Department, district administration, co-management committees, project beneficiaries, school and college level youth, teachers, non-governmental organizations, the private sector and media representatives as per the schedule below.



Photo 37: Deer on Nijhum Dweep

Table 3: Schedule of International/National Days and weeks in 2015-2016

Feb 2	Mar 21	Mar 23	April 22	May 22	June 5	June	July	Oct 15
World Wetlands Day	Intl. Day of the Forests	Co-Management Day	Intl. Earth Day	Intl. Day for Biological Diversity	World Environment Day	Tree Fair	Fish Fair /week	Rural Women's Day

Grants

The grants program is designed to support all IR activities and achieve CREL project targets. In Year 4, grants were used to help build CMO organizational capacity and implement elements of their Long Term Plans articulated in Annual Development Plans and for researchers to inform policy through the JDR 3rd research grants.

CMO Implementation Grants. Early in Year 4, each CMO developed an annual development plan (ADP)-based on the FD-approved protected area plans and/or landscape plans. These ADPs describe what the CMO will do that year to improve the resource and prepare for climate change. (By the end of 2016 almost all CMOs developed Long Term Plans which are the basis of subsequent ADPs.) During the first and second quarters of Year 4, CREL awarded a 2nd round of grants to its grantees to support four general sets of activities. These activities were directed at building CMO sustainability (Activity 2.3) with more responsibilities, helping them implement their Annual Development Plans (Activity 2.2), Long-term Plans (Activities 3.1 and 3.3), and enabling them to undertake and contribute to the completion of some of CREL year 4 and 5 planned activities (e.g. Activities 2.5, 3.5, 3.6, 3.7, 3.8, 3.9, 3.10, 4.2, 4.6 and Communication events and materials). This second round of grants included newly formed CMOs/ CBOs as well as CMOs/ CBOs awarded grants in the 1st round of grants. In year 5, CREL will oversee and monitor the grants awarded in 2016, monitor pre-set deliverables and cost share reports, release funds, settle non-expended items, conduct evaluations and issue close-out memos as stated per agreements. In-kind support for construction proposed by CMOs is provided through construction contracts (see construction).

JDR 3rd Research Grants will be continued through the 2nd quarter of Year 5 and support IRs 1 and 2. In Year 4 CREL awarded a new grant to Mr. Hafijul Islam Khan and his team again received another grant directly from the JDR program. CREL will monitor both wetland and forest related grants and will receive four due reports within the 2nd quarter of Y5.

The following grant activities were implemented during Year 4:

Grants 1. CMOs and CBOs Implementation grants

During the second and third quarters of Year 4, CREL awarded its 2nd round of grants. This year the first round of grants supporting CMOs and CBOs building their capacity were monitored, reports collected, funds released and close-out memos issued. The second round of grants went to both recipients who had already received an organization capacity building grants previously as well as a few 1st time recipients to help them implement their Annual Development Plans, contribute to CREL work plan activities and to achieve sustainability (as measured by CREL's CMO sustainability indicators and scorecards).



Photo 38: Teacher is Taking Class at Garjantali VCF FELC in Medakacchapia CMC under 2nd Round of Grants Program

In Y4 all CMOs and CBOs received training on preparing and budgeting of simple proposals in line with their existing plan priorities and resource mobilization plans to get funds under the second round of grants. CMOs/CBOs that were awarded grants then received post-award training on grants and financial management, record keeping, managing projects, reporting and auditing. Regional and site-based staff conducted these trainings for CMO office bearers, general members and accounting staff. In some cases, the Grants Unit of CREL Dhaka office also

facilitated the training with the aim to build capability to independently prepare and manage grants in the future from various agencies. Regular progress monitoring was conducted by CREL staff to track the performance of CMOs and CBOs. This activity directly supported IR 2 Activities 2.5 and 2.9 in building capacity of CMOs, and enabled CMOs to implement their plans including maintenance of visitor facilities (such as trail maintenance), forest restoration and other climate resilient livelihoods activities.

During Year 4, CREL successfully closed 29 first round grants from Year 2 and 3. For the second round of grants, CREL received 46 applications, which resulted in 46 new grants (14 CMOs received 2 grants) totaling \$528,927 of CREL funds and \$154,381 of cost share from partners.

Activity Year 4 Deliverable	Status
Request for applications	Completed
Grant evaluation sheet	Completed
Grant agreement	Completed
Grant modification	In progress
Training administered to CMO participants	Completed
Prioritized training/ workshop plan and materials (on settlement of non-expendable items and close-out process)	In progress
CMOs and CBOs activities report	In progress

Table 3: Round 1 and Round 2 Grants Status on Y4 (October 01, 2015 to September 30, 2016)

Categories	Total No. of CMOs/ CBOs/ RMOs	Total Grants Value in USD	Total Grants Spending on Y4 in USD	Grants Execution Status	Nos. of post-grant/grants-financial Mgt. training/ refresher conducted	Remarks
Round 1 Large Grants	21	\$404,861	\$157,827	Completed & Closed-out	Completed Y3	All are under capacity building grants and grant value is above \$5K
Round 1 Small Grants	8	\$39,902	\$18,455	Completed and Closed-out	Completed Y3	All are under capacity building grants and grant value is within \$5K
Round 2 CMOs and CBOs Implementation Grants	46	\$528,927	\$400,640	On going	31	All are under sustainability grants and grant value is above \$5K

Grants 2. Award competitive research grants to address knowledge gaps and test techniques and methods.

Winrock's JDR 3rd Scholars Program builds the capacity of mid-level university researchers, to develop practical policy briefs grounded in rigorous science. In Year 4, CREL-JDR 3rd wetland research grant was awarded with two grants, the 1st funded by CREL and the 2nd one awarded

from Winrock’s JDR program. The wetland research grant will be continued through the 1st quarter of Y5 while the forest grant will continue into the 2nd quarter of Y5. Settlement of non-expendable items will be finalized in the 2nd quarter of Y5 and close-out memos for a formal ending of both the grants will be issued. (Please see Activity 1.6).

Table 4: CREL-JDR 3rd Research Grants Status (October 2015 to September 2016)

Categories	Name of Lead Principal Researcher	Total Grants Value in USD	Grants Execution Status	Total Grants Spending on Y4 in USD	Nos. of Deliverable Report Received	Remarks
JDR 3rd Grant - Forest	Dr. A. H.M. Raihan Sarker	\$24,910	On going	\$14,946	2	
JDR 3rd Grant – Wetland 1	Mr. Hafijul Islam Khan	\$24,995	On going	\$21,789	3	
JDR 3rd Grant – Wetland 2	Mr. Hafijul Islam Khan	\$8,351	On going	\$1,670	1	This agreement is interlinked with the “Wetland 1” grant program and directly funded by JDR Program

Monitoring and Evaluation

Measurement is essential for evaluating the effectiveness of our approaches, measuring the changes and assessing the impacts of the project. CREL measures the impact of activities and changes to the ecosystem, the capacity of organizations and income of forest and wetland users. M&E staff works closely with component leads to track activities, establish baselines, measure and benchmark progress, and manage the CreLink database.

M&E 1. GIS, remote sensing (RS) and landscape mapping.

By the end of Year 4, the Geographical Information Systems (GIS) team of the project completed high-resolution, imagery-based land cover maps for all 28 project sites (see Table 6 and Figure 41) as a biophysical baseline for project sites. Site teams, CMOs and concerned stakeholders are using those maps for landscape planning. This includes, thematic maps, e.g. climate-change threat/risks and adaptation maps for 15 sites, management zonation maps for 13 sites; and two high-level visit maps for proposed Ramsar sites. Given the changing nature of maps we felt that a collection of maps for every site would not be very useful and instead CREL has been developing maps as needed for CMOs and others to use for planning purposes. Figure 40 provides an example of maps created under CREL.

Table 5: Maps Completed in Year 4

Sites, by Ecotype	Total sites	Land cover maps	Zonation maps	Climate risks and adaptation
Forest sites	22	22	11	15
Freshwater wetland sites (one is an ECA)	3	1	1	0 (1 planned in Y5)
Coastal ECA sites (note Sundarbans ECA is covered in the forest sites and not counted here)	3	5	1	0 (1 planned in Y5)

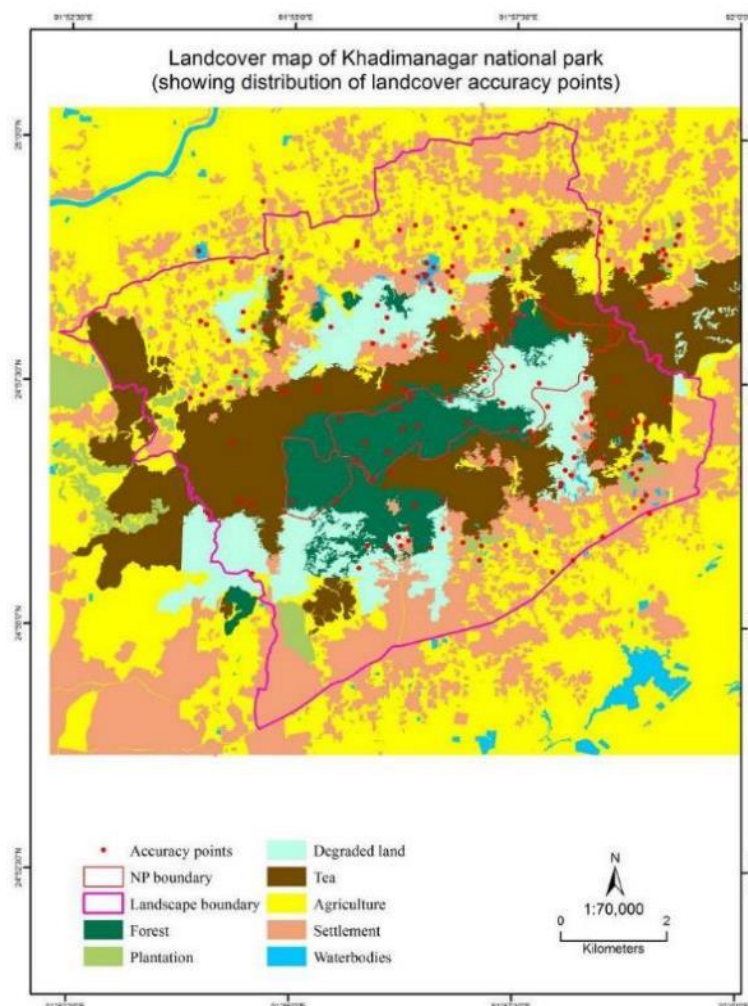


Figure 2: Land cover map (from RapidEye, 2013) for Khadimnagar NP

Table 6: Area statistics of Khadimnagar NP landscape area

Land cover class	Area (ha)
Degraded forest	1,113.69
Forest	863.86
Agriculture	1,617.44
Palm garden	48.08

Plantation	92.34
Settlement	1,779.48
Tea	1,888.61
Water bodies	51.04
Total area (ha)	7,454.54

Table 7: Accuracy matrix (confusion matrix) of Khadimnagar NP

		Observed (ground truth)								
		Agriculture	Degraded land	Forest	Plantation	Settlement	Tea	Water bodies		
Predicted (mapped as)	Map features									
	Agriculture	22				1	2		25	88%
	Degraded land	1	17				7		25	68%
	Forest		2	23					25	92%
	Plantation	1	1		23				25	92%
	Settlement	7	3			13	2		25	52%
	Tea	3	2				20		25	80%
	Water bodies	1				1		23	25	92%
	Grand Total	35	25	23	23	15	31	23	175	
		63%	68%	100%	100%	87%	65%	100%		
		Producer's accuracy								

In Year 4, the GIS team initiated a trend analysis of land cover classes for a comparative time series analysis in four forest PAs (Lawachara NP, Chunati WS, Fasiakhali WS and Himchari NP) based on Landsat data. This analysis was planned to test what changes in landcover could be determined from satellite imagery before and during the period of co-management. The land cover classification includes forest cover, settlement, waterbodies, agriculture land and plantation sites for the four-time periods (Table 9). The classification of year 2001 and 2015 is completed (Figure 41 and Table 5) and the remaining two years will be completed in Year 5.

Table 8: Landsat TM imageries acquired for time-series analysis

Sites	CMO formation	2001	2005	2010	2015
Lawachara NP	Sept/ 2005	30-Jan-2001	10-Feb-2005	08-Feb-2010	08-Jan-2016
Chunati WS	Aug/ 2005	30-Jan-2001	10-Feb-2005	08-Feb-2010	08-Jan-2016
Fasiakhali WS	Dec/ 2010	30-Jan-2001	10-Feb-2005	08-Feb-2010	08-Jan-2016
Himchari NP	Jul/ 2010	30-Jan-2001	10-Feb-2005	08-Feb-2010	08-Jan-2016

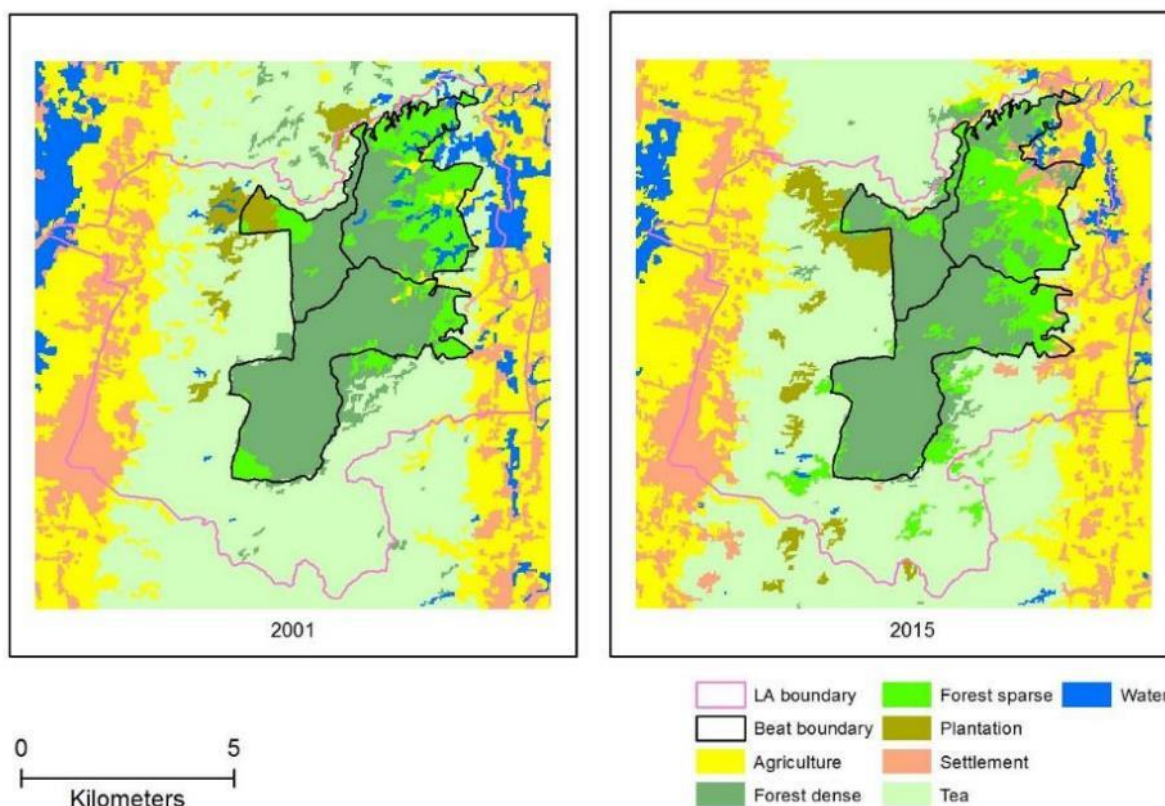


Figure 3: Land cover classifications (Landsat TM, 2001 and 2015) of Lawachara NP

Table 9: Area statistics from trend analysis (Landsat TM, 2001 and 2015), Lawachara NP.

Land cover class	Area (ha) 2001	Area (ha) 2015	Area (ha) change
Forests (dense)	2,035	1,892	(142)
Forest (sparse)	722	922	199
Plantations	283	368	85
Settlements	1,562	1,871	309
Agriculture	3,584	4,191	607

In Year 4, the GIS team also surveyed at Chunati WS with Google Earth, higher resolution satellite-image (WorldView-2) and conducted a field-based survey to identify the land cover classes which were not detected previously from RapidEye. The land cover features covered using this methodology include betel leaf garden, scattered settlements, and plantation of multiple years (figure 43). This exercise revealed that high-resolution remote sensing imageries with extensive field survey can generate land cover classes which have utility at the local level.

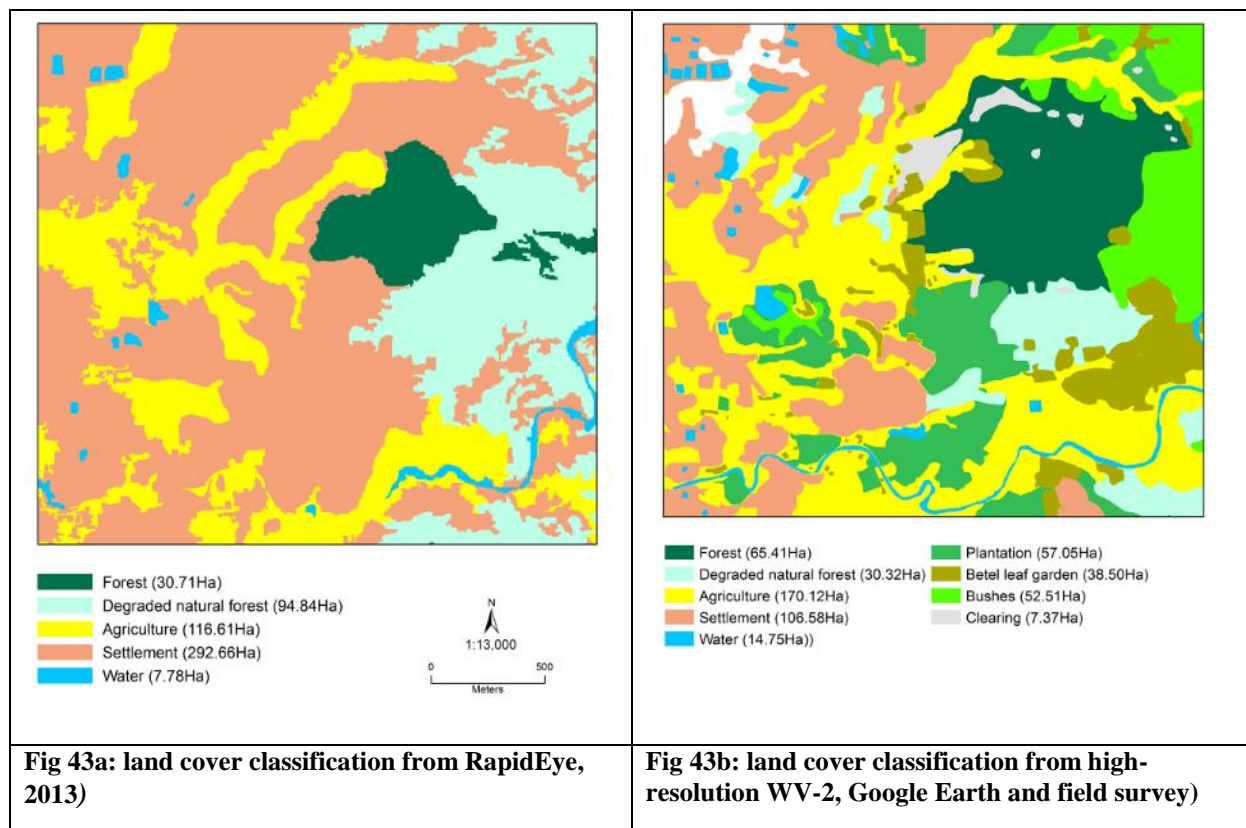


Figure 4: Detailed high-resolution RS and field survey mapping (part of Chunati WS).

During Year 4, CREL orientated CMOS representatives and CREL field staff in all four regions on how to read and interpret Google Earth, GIS, Global Positioning System (GPS) and at the central level, CREL GIS team worked closely with the Resource Integrated Management System (RIMS) unit of Forest Department on land cover mapping and forest inventories. However, the work with DoF and DoE, was limited to a few efforts where CREL developed maps that show the expansion of aquaculture in Hail Haor during 2000-2014, Sundarbans' ECA landscape, and CREL helped reconcile maps of Hakaluki Haor ECA.

CREL maps were used to presented at the Regional Conference on Co-management of Natural Resources (COMACON) held in Bangkok, Thailand during 28-30 October, 2015 and at the Gobeshona Conference held in Dhaka during 8-11 January 2016. CCA and threat/risk maps were used in an international research paper "Synergies of Remote Sensing with Social Science Tools for Participatory Management of Natural Resources" (Syed, Amin, Rahman, & Mallick, 2015), and in a poster for USAID (Figure 44).

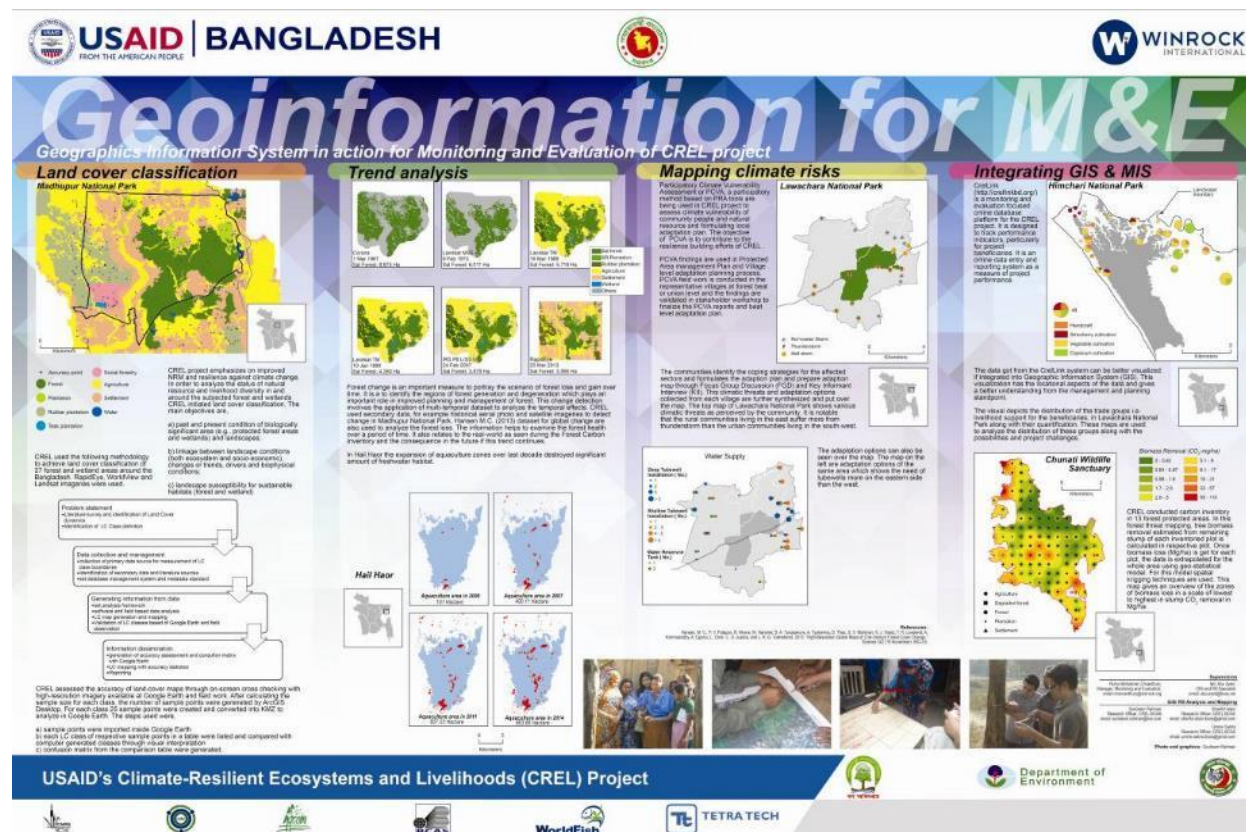


Figure 5: Poster for USAID's map gallery, integration of GIS in M&E

In Year 5, all GIS/RS data and map outputs will be shared with USAID and GoB agencies electronically, and hardcopies will be provided to the concerned CMOs/CBOs and local GoB offices for their future use.

Activity Year 4 Deliverable	Status
i) Land cover and thematic maps for all project sites, updated as needed for management plans and use by CMOs, FD, DoF and DoE;	i. Land cover maps for all sites done;
ii) Comparative analysis of forest cover for forest PAs based on RS;	ii. Trend analysis done 2000, 2015; in progress 2005, 2010;
iii) Develop/transfer set up and manpower with GIS/remote sensing capability at DoF, FD and DoE;	iii. FD only;
iv) Complete PA atlases, print and hand over to CMOs and FD/DoF/DoE.	iv. Dropped

M&E 2. Biological Monitoring of Biophysical Changes

To track biophysical changes in both forest and wetland sites, CREL continued the following three sub-activities in Year 4: annual monitoring of fishing effort and fish catches; Wintering water bird surveys in five sites (Hail Haor, Hakaluki Haor, Nijhum Dweep, Sonadia and St Martin's Island) and resident forest bird monitoring in 15 forest PAs. This section highlights the accomplishments of all three sub activities.

1. *Annual monitoring of fishing effort and fish catches:*

CREL has continued to monitor fish catches in eight sites comprising rivers, beels, floodplains and landing centers. In Year 4, CREL was able to assess year to year changes in catches for two sites, in the Sundarbans (8 observation sites) and Sonadia (2 observation sites). Data from comparable 12 month periods reveal a generalized increase of fish catch in Sundarbans (figure 45), though at two of the eight locations (Boleswar River and Gabtola Bazar landing center), catches showed a slight decline. Biodiversity measured from monitoring catches revealed in Sundarbans, as a whole, has a relatively diverse catch (compared with some inland sites (Shannon-Weiner Index was $H' = 3.07$). Because CREL knows that fishing has not significantly changed, the conclusion is that the efforts of co-management stakeholders, including the CPGs that work to stop harmful fishing practices has led to an 18% increase in fish catches between 2014 and 2016. These increases have benefited about 100,000 people in the Sundarbans living in households that catch fish seasonally or year-round, and has generated an additional US\$ 5.5 million to incomes from fishing.

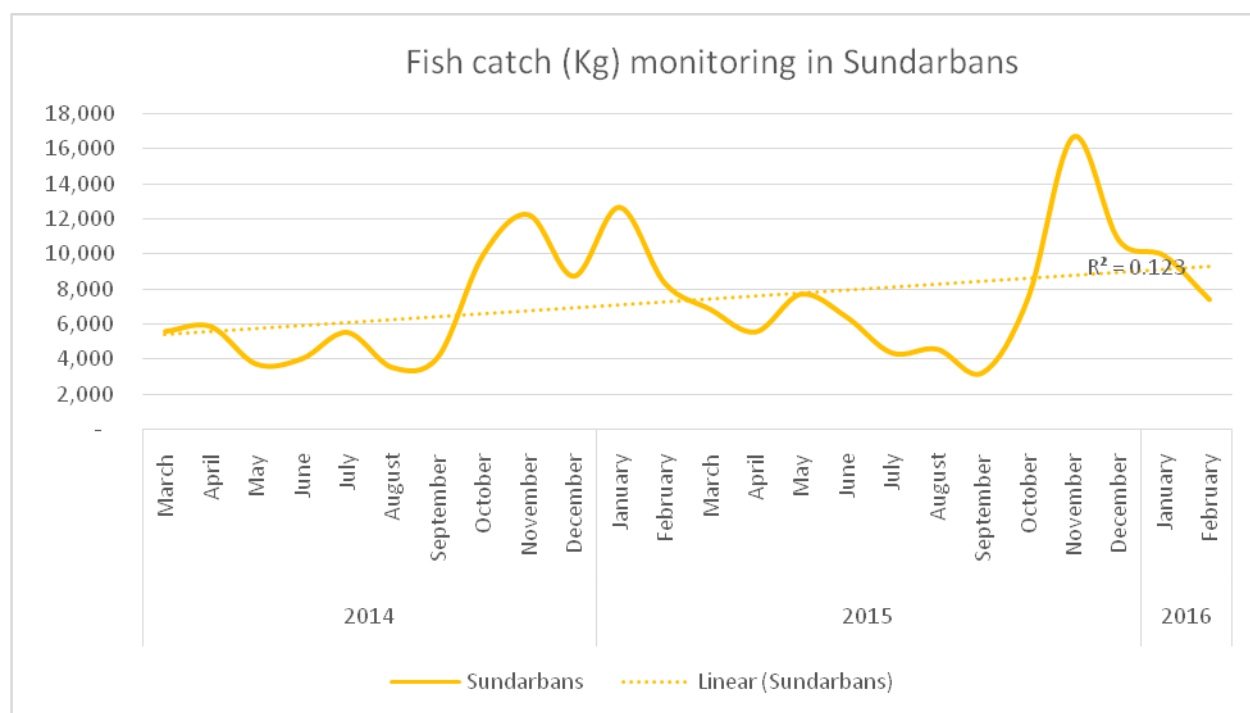


Figure 6: Fish catch monitoring (aggregated results of 8 sites) in Sundarbans.

In Sonadia ECA, there is no clear changes in the fish catches in either landing center (at Khutakhali and Nazirartek points). Any slight increases are heavily influenced by the catches in the early and last months monitored to date. Hence in Year 4, CREL could not estimate number people benefited or income change. This will be revisited when a third year of data will be collected and analyzed in February 2017.

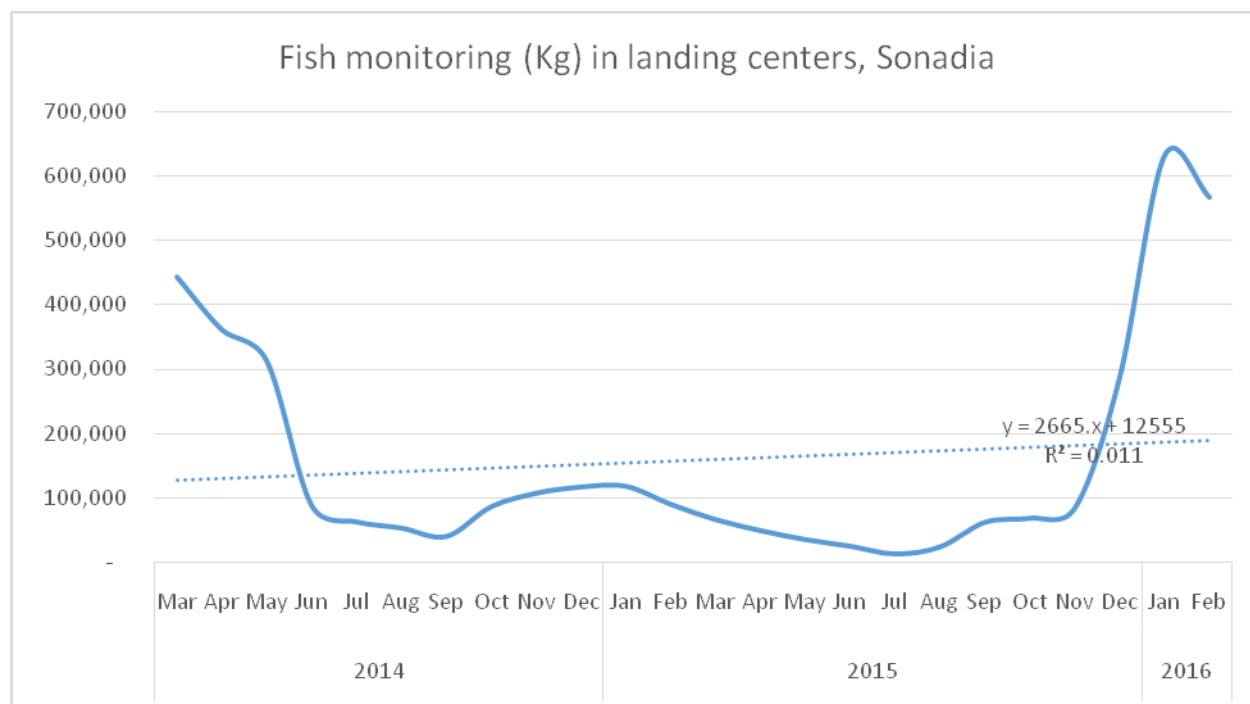


Figure 7: Fish catch monitoring (2 landing centers) in Sonadia island site.

Table 10: Fish Catch Monitoring

FCM Sites	Nos. of sites	Start	Anticipated end
Hail Haor	6	8/3/2013	8/31/2016
Hakaluki haor	9	1/12/2014	1/31/2017
Halda river	2	5/26/2014	11/31/2016
Nijhum Dweep	1	9/12/2014	10/31/2016
Ratargul, Sylhet	1	1/25/2016	3/31/2017
Sonadia island	2	2/15/2014	2/28/2017
Sundarbans	8	3/9/2014	3/31/2017
Tengragiri	1	4/2/2015	3/31/2017

2. *Wintering water bird surveys in five sites (Hail Haor, Hakaluki Haor, Nijhum Dweep, Sonadia and St Martin's Island)*

During Year 4, as part of the continent wide coordinated Asian Waterbird Census, CREL supported surveys of the major CREL wetlands in collaboration with the Bangladesh bird club. A final round of wintering waterbird surveys is scheduled during December 2016 to February 2017.

Hakaluki Haor is the largest freshwater wetland system in northeast Bangladesh (over 18,000 ha) and a team of observers visiting a total 42 individual beels or waterbodies over two days. There was a welcome increase in numbers of waterbirds after recent declines: observers counted three times more ducks in 2016 than in 2015 (figure 47). In total 34,264 waterbirds of 56 species were

recorded, with 30% of waterbirds concentrated in Fuala Beel alone. The most notable sightings were five of the critically endangered Baer's Pochard after none were sighted in 2015. Note that Hakaluki is the main site for this species in Bangladesh but it is on the brink of extinction.

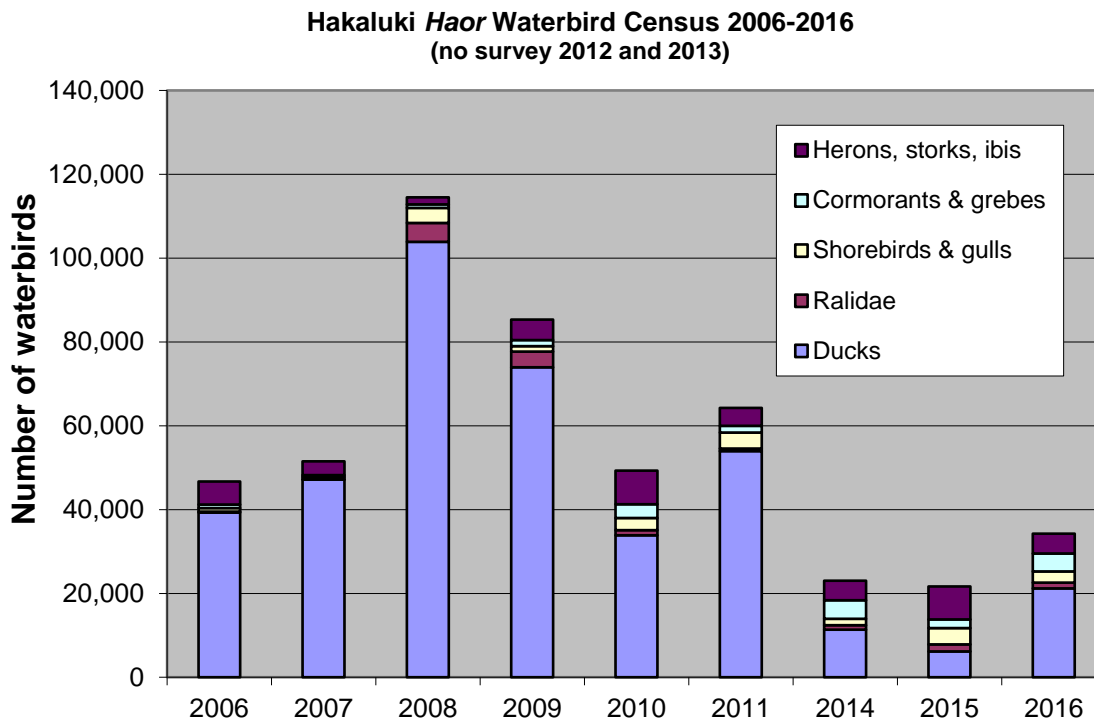


Figure 8: Hakaluki Haor waterbird census 2006-2016.

In Hail Haor, in the Baikka Beel wetland sanctuary, waterbirds were counted for the fourteenth consecutive year. In total 8,832 waterbirds of 38 species were counted in the 170 ha sanctuary, a substantial increase from January 2015 (figure 47 and 48). In December 2015 over 11,000 waterbirds were counted which was the second highest total ever in this location. In January 2016, the total would have been closer to the December count except the flocks of whistling-ducks had moved to an aquaculture area managed for wildlife under guidance of the Baragangina RMO, which manages Baikka Beel. Notable sightings included a record count of 200 Cotton Pygmy-geese (which had successful nesting seasons in boxes in the sanctuary in both 2015 (21 out of 30 boxes used) and 2016), over 1,800 Common Teal, a remarkable 86 Glossy Ibis (largest flock in Bangladesh since its return in 2011 after over a century without records), and high numbers of shorebirds including 664 Spotted Redshank and over 1,000 Ruff.

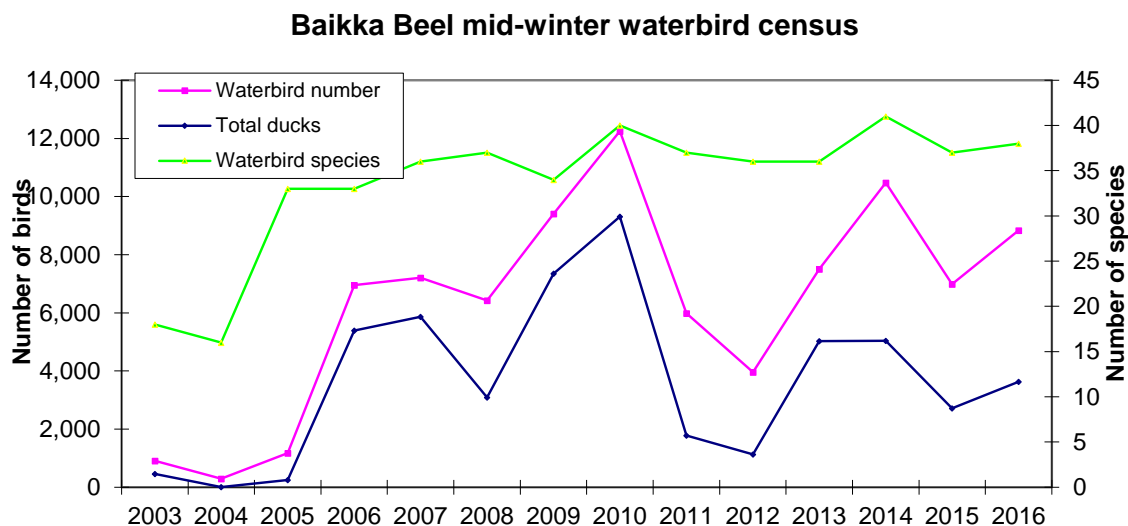


Figure 9: Mid-winter waterbird census in Baikka beel (2003-2016)



Photo 39: Part of shorebird flocks in Baikka Beel, January 2016

On the coast, Nijhum Dweep National Park waterbirds were counted for the ninth consecutive year. Although waterbird numbers fell from the 2015 level, the 2016 count of 9,547 of 33 species is still higher than five out of nine survey years (figure 50) and in the range of normal inter-year variations.

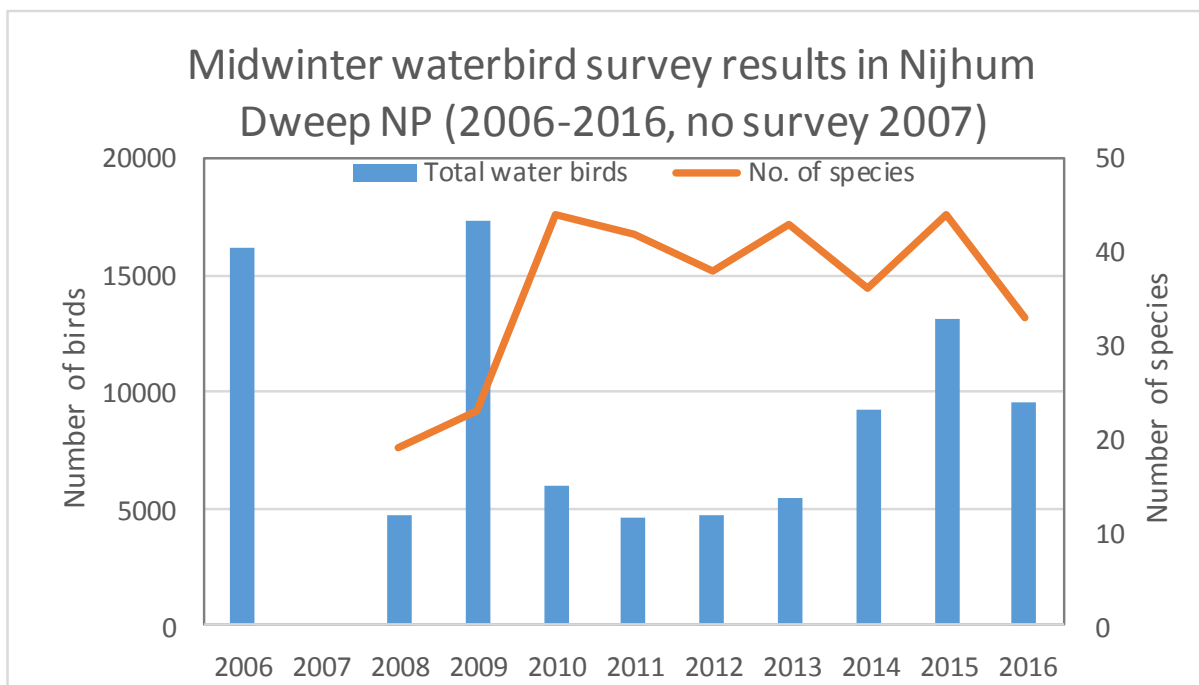


Figure 10: Mid-winter waterbird survey in Nijhum Dweep NP (2006-2016)

Observers conducted a repeat count in February of Indian Skimmer (Nijhum Dweep National Park is the main wintering site globally for this vulnerable species) and found 1,138 birds. In a separate study by a member of the CREL team, two birds were fitted with satellite tags which are already revealing new information on their movements, with one reaching Bihar, India in April 2016. Also of note were three of the critically endangered Spoon-billed Sandpiper and one endangered Spotted or Nordmann's Greenshank.



Photo 40: Satellite tagged Indian Skimmer



Photo 41: Tagging Birds



Photo 42: Survey team on Nijhum Dweep

On the southeast coast, on Sonadia Island, a total of 46 species of waterbirds were recorded between October 2015 and February 2016 with the highest count (6,924 individuals) in February 2016 (figure 54). The most abundant species were Lesser Sand Plover followed by Little Stint /Red-necked Stint (these two very similar species are not distinguished during counts).

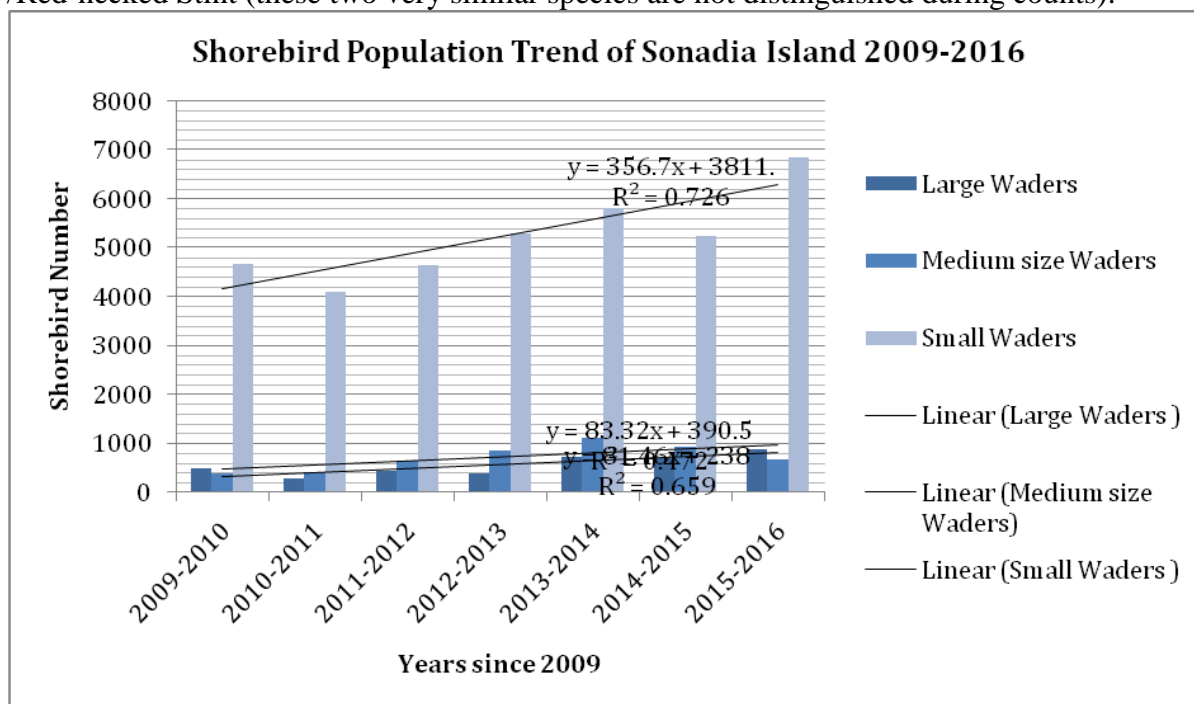


Figure 11: Shorebird population in Sonadia island (2009-2016), maximum counts of each year

Overall, the number of shorebirds appears to be increasing, particularly for large waders (Eurasian Curlew, Whimbrel, Black-tailed Godwit). The maximum number of critically endangered Spoon-billed Sandpiper (19 individuals) was recorded in January 2016 including four flagged birds (Lime 09, Lime A2, Lime 31 and Lime V4) that were marked on their nesting grounds in Chukotka, Russia. Other globally threatened shorebirds include 13 Spotted or Nordmann's Greenshank and 450 Great Knot.



Photo 43: Leg-flagged Spoon-billed Sandpiper on Sonadia Island

1. *Resident forest bird monitoring in 15 forest PAs*

In Year 4 CREL sponsored the Bangladesh bird club to work with local birders and FD personnel to conduct repeat surveys in 15 forest Protected Areas (Teknaf WS, Inani RF, Himchari NP, Medakachapia NP, Fashiakhali Wildlife Sanctuary (WS), Chunati WS, Kaptai NP, Dudpukuria-Dhopachara WS, Hazarikhil WS, Baroiyadhala NP, Modhupur NP, Rema-Kalenga WS, Satchari NP, Lawachara NP, and Khadimnagar NP). This involved four rounds of surveys along each of 54 transects during March-June 2016. A final year of resident forest bird survey in these sites will be conducted during March-June 2017.

Five of the PAs have only been surveyed for 2-3 years, too short a period to determine overall trends. The other ten PAs have data for 7-11 years which is enough data to show trends. Five PAs (Modhupur NP, Satchari NP, Rema-Kalenga WS and Khadimnagar NP) show more positive than negative trends suggesting that protection is having some positive impacts on the forest bird populations. The other six sites, Lawachara NP, Chunoti WS, Fashiakhali WS, Teknaf WS and Medakachapia National Park showed more declining trends than increases for indicator birds. Factors presumably indicated by these trends are continued loss of old large trees, limited regeneration of mid-level trees, and in Lawachara possibly impacts of increasing disturbance from visitors affecting ground /undergrowth species that recovered in the early years of co-

management. This is a concern, and includes well-known PAs such as Lawachara NP, Chunoti WS, Fashiakhali WS, Teknaf WS and Medacachapia National Park.

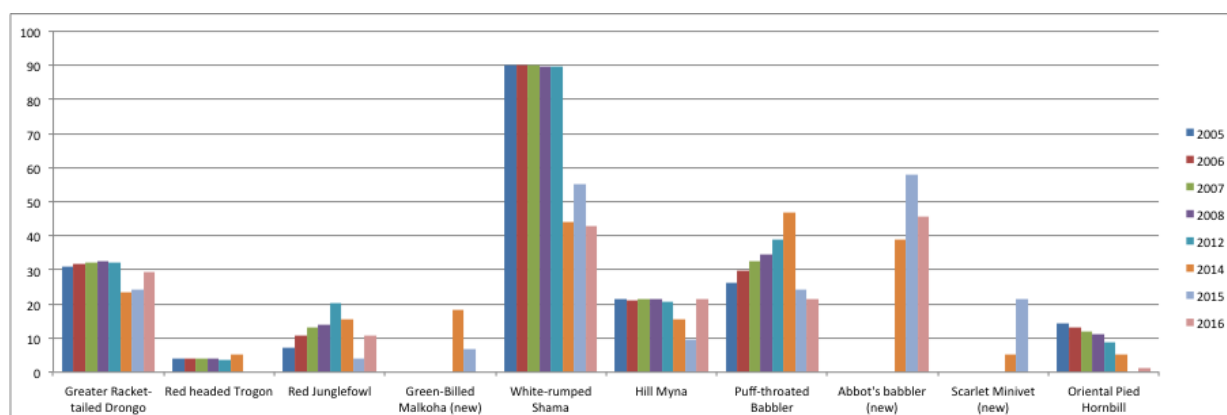


Figure 12: Density of Indicator birds (birds/km²) in Lawachara National Park during March-June 2016 in compared to previous years.

Activity Year 4 Deliverable	Status
Annual survey reports on: fish catch monitoring, waterbird census in selected CREL sites and indicator forest bird survey; mainstream simple monitoring with CMOs and local/regional resource persons; and consolidate assessment of trends over project period;	Fish, birds and CMO-led monitoring are in progress; Consolidated assessments will be finalized in Y5

M&E 3. Socio-Economic Surveys and Studies

In Year 4, CREL conducted sub-activity surveys to quantify progress against indicators and also generate evidence on the impacts and performance of co-management and climate resilient livelihoods. Table 12 summarizes the surveys conducted. Indicator Table, Annex A, presents the results of the surveys in indicator #3 #7 and #17

Table 12: Socio-economic surveys in CREL Year 4.a

Socio-economic surveys and studies	Schedule
Sample surveys of livelihood beneficiary households involving a baseline year and one impact year (Indicator 17).	Aug-Oct 2016
Census of households trained in agriculture sector enterprises to determine if they adopt and apply improved practices (Indicator 19).	Aug-Oct 2016
Annual CMO sustainability and capacity assessments using scorecards (Indicator 10).	Aug-Oct 2016
Assessments of GoB, CMOs and local government institutions' capacity to address climate change using questionnaires (Indicator 9).	Aug-Oct 2016
An assessment of female empowerment using scorecards for members of FELC (Indicator 10).	Oct 2016

The socio-economic surveys of previously surveyed households (to cover a second impact year) will be undertaken in early 2017 to cover the 2016 impact year. Similarly repeat surveys of tourism related enterprises have been rescheduled to early 2017 so that numbers and incomes in 2016 can be estimated.

Activity Year 4 Deliverable	Status
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Survey results and reports on: sample surveys of households; monitoring reports on adoption of improved agricultural technologies; assessment of local service provider impacts; assessments of CMO capacity; assessment of institutional capacities in climate change adaptation; assessment of tourism enterprise changes; assessment of female empowerment; other research and studies.	Five surveys out of 8 are completed, remaining 3 are rescheduled for Year 5
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M&E 4. Consolidate Impact Findings and Evidence

CREL and the previous projects have generated a large body of data through various surveys. In Year 4, the M&E team continued to compile evidence and impact findings. In Year 4, CREL also identified datasets and knowledge products that will summarize its impacts and be of value to USAID and other organizations and policy makers. Data sets continue to build up and JDR 3rd Study findings are due. In Year 5 reporting /consolidation of summaries of impacts, lessons learned and success stories is planned covering the project period (and in some cases earlier years). In Year 5 these monitoring data sets and other knowledge products will be compiled representing the life of project into impact evidence reports and other outputs.

Activity Year 4 Deliverable	Status
Impact reports and associated archives of data, rigorous consolidated analysis of changes over time and effectiveness of climate resilient co-management and livelihoods development, publications, journal papers and knowledge made publically available in collaboration with Com 5.	In progress

M&E 5. Maintain CreLink and Feedback on Project Implementation

The CREL M&E team continued training and capacity building to maintain data entry into the web-based database and archive and track project activities. These data are being used to develop reports for regions, managers, partners and stakeholders. Based on the recommendations of users, a significant improvement has been made to CreLink to facilitate better management decisions in the project.

In Year 4, CREL carried out a series of regional and site level workshops to familiarize staff members on new features of the database and to provide hands-on training on entering new types of data used in FY2016.

Activity Year 4 Deliverable	Status
CreLink is functioning and being used in management, monitoring and reporting for CREL; appropriate archive made publically available.	Completed till Sept/2016

Environmental Compliance

Key Accomplishments

- CREL EMMP has been revised further, and submitted to USAID.
- The streamlined approval procedure is in place.
- Formats for 'Environmental Compliance Completion Reports' were developed.
- Construction Engineers were oriented about 'Environmental Compliance Monitoring and Reporting'.
- The archiving of environmental documents is in place.

Environment 1. Development of a streamlined approval procedure.

The streamlined approval procedure via an updated EMMP was agreed to by USAID MEO and used this year, eliminating the previous bottlenecks in environmental approval processes. The revised CREL EMMP included three detailed Annexes: (1) EMMP Process and Design Supplement/Standard and Specific Environmental Conditions, (2) Illustrated Guide of Building Specifications for Conservation Area Facilities within the Protected Area System (2007), and (3) Supplement A: Illustrated Guide of Building Specifications for Conservation Area Facilities within the Protected Area System (2015). Archives containing detailed documentation for environmental mitigation measures for construction activities is being maintained and is available for review by USAID upon request.

Environment 2. Environmental Compliance Activities

The use of the revised EMMP is working as per expectations. The compliance of the EMMP has been structured further during this period. All the new construction proposals are going through a 'screening' process, which involves both physical inspection and desk reviews. The construction monitoring forms have been updated to include both the engineering and EMMP issues together. The construction engineers have been oriented about the *Standard and Specific Environmental Conditions*, monitoring processes and the reporting system. Regular monitoring, as specified in the EMMP, is under way at all on-going construction sites by trained local teams, which are comprised of the engineering company (Module) and CREL staff. Occasional site inspections are being done by senior engineers of Module, the Environmental Compliance Specialist and CREL HQ staff from Dhaka. Since the construction sites are widely scattered and the number of sites will be increased, CREL management agreed with Module to hire 3 more senior engineers for better supervision and monitoring of construction and environmental mitigation.

During this period, documentation processes for biophysical developments has been completed for 3 wetland/fish sanctuaries, 5 mangrove afforestation initiatives, 24 institutional afforestation initiatives, 4 tree nurseries, and agroforestry in approximately 2,500 homesteads.

The *Environmental Compliance Activity Consolidations* have been documented and approved for 93 construction activities under 11 Categories during the first two quarters. The consolidation process was reinitiated during the last quarter (Jul-Sep 2016) to screen a new set of construction activities from an ambitious list received from CMOs and FD.

Environment 3. Completion Reporting.

The category-wise formats for *Environmental Compliance Completion Reports* have been developed. Three new construction completion reports were finalized during this period. Construction activities are underway and the required completion reports will be developed and submitted on a timely basis as per the EMMP. Afforestation Completion Reports have been developed for the activities taken place in 2015.

Environment 4. Archive Environmental Documentation.

All original documentation developed for environmental clearance (i.e. proposal from sites, visualization and designs prepared by the engineering firm [Module], consolidation of documents which are linked to the Google Earth), processes, monitoring and subsequent completion reports are being archived in the CREL office and available for review by USAID upon request. This process is ongoing.

Construction

All construction under CREL are small-scale infrastructure intended to support improvements in biophysical condition of PAs and wetlands and their resiliency to impacts from climate change, improve tourism management facilities, climate-change resilience, support CMOs operations and income-generating activities, and promote sustainable, climate-resilient livelihoods. CREL incorporated construction activities and a line-item budget for construction into the cooperative agreement.

As required by USAID, CREL engaged a certified engineering firm (Module Architects) that oversees all construction activities including engineering design, materials selection, construction, quality assurance and required environmental monitoring during and after construction. All architectural designs are shared with involved CMOs and government agencies, who are also engaged in monitoring the construction process. In general, construction is in response to priorities identified by CMOs in their plans and amounts to in-kind support to CMOs identified in proposals to CREL.

Round 1 Construction: Wetland earthwork

In Northeast region construction works were initiated in six sites in early 2015. Progress made in 2016 is listed below in Table 13. The delays in completion of wetland construction were due to unexpected rain and flooding.

Table 11: Construction in Round 1.

Sites	Status
Jaduria beel (Hail haor)	Dropped in Year 4, technically unfeasible
Baiya beel (Hakaluki haor)	Complete in Year 5
Gazua beel (Hakaluki haor)	Complete in Year 5
Koiyar-kona beel (Hakaluki haor)	Complete in Year 5
Polobhanga (Hakaluki haor)	Dropped in Year 4, unable to reach agreement among stakeholders
Tolar beel (Hakaluki haor)	Dropped in Year 4, technically unfeasible

Activity Year 4 Deliverable	Status
Activity completed; 6 wetland habitat restoration projects completed.	Partially completed; 3 sites dropped in Year 4 due to construction issues, 3 sites to be completed in Year 5

Round 2 Construction: PA and CMC facilities

To support the introduction and improvement of entry fee systems and related revenue sharing, CREL supported small-scale construction including ticket counters, toilets, shelters, benches, CPG patrol shades, renovation of walking trails, construction of CMO offices and water facilities. Round 2 construction activities were initiated late in 2015 (Year 3), and continued during Year 4. Out of 121 activities (in 23 sites), 70 are completed and 9 are in progress (7 sites); selected items from 36 activities (in six sites) are incorporated in Round 3; and remaining 6 are dropped (not feasible). During Year 4, there were some challenges in implementing construction such as seasonality, additional/modified requirements and requests from CMOs/GoB agencies, relocation of construction sites, and inadequate manpower of the engineering firm. These challenges and solutions will be taken into consideration during planning of Round 3 construction.

Activity Year 4 Deliverable	Status
Contracts awarded and activity completed; small-scale visitor infrastructure completed in sites with entry fees planned.	In progress

Round 3 Construction: PA and CMOs/CBOs facilities and promote eco-tourism

During Year 4, CREL initiated a third round of construction activities to accommodate new proposals from CMOs and CBOs as well as incomplete activities from earlier rounds. Through 29 proposals more than 500 activities were requested from four regions. The number and type of activities proposed greatly exceeds the time and resources remaining on CREL. To screen proposed activities, a construction review committee and CREL senior management identified a fast track/high priority list of 318 activities (including pending activities of Round 1 and 2) and provided this to the engineering firm. Based on the site visits by the engineering firm, as well as consideration on CREL tenure, budget availability and feasibility of physical works, CREL will decide the final list of activities and incorporate them into the relevant construction activity in the Year 5 Annual Work Plan.

Activity Year 4 Deliverable	Status
Proposal solicitation and received (29 proposals with >500 activities)	Completed
Proposal scrutinized and reviewed by CRC (318 activities)	Completed
Field visit and cost estimation by Engineering firm	Completed (except 2 proposals)

Program Operations



In PY – 4, with gradual establishment of the GoB ownership, CREL’s organizational and program structures has notably developed as the project evolved in a more structured way. Winrock and its partners continue to manage CREL adaptively and responsively to achieve the

project's objectives, deliver maximum impact with USAID investments, and serve local communities with targeted, appropriate and sustainable solutions.

Implementation Challenges

The CREL implementing team encountered and addressed some challenges during Year 4 as it continued to innovate, adjust and deliver planned outputs while remaining responsive to stakeholder requirements and feedback.

CMO sustainability

Sustainability of CMO institutions continues to be a challenge that takes considerable CREL effort and resources. Sustainability is dependent upon ensuring a long term vision and planning process; a regular and predictable source of funding; capable, stable and transparent leadership; and more equitable ownership by the community and other stakeholders. While the progress has been accelerated in this year, CMO sustainability is clearly a long term process that will continue to need significant nurturing, political support, and involve many players with varying levels of commitment and capacity. Current policies for wetlands leasing and management do not entirely prevent elite capture of public waterbodies which would otherwise be more sustainably managed, provide more benefits to a larger segment of the community and provide needed resources for CMO sustainability if under co-management structures. Policy revisions have been made to support this which have met the approval of the Department of Fisheries but still need to be agreed to by the Ministry of Land. Policy changes are now in place for the sharing of NTFPs, entry and other fees from forests and PAs but need greater socializing within the government and communities. Greater access to facilities and services for tourism and the overall planning for such activities by CMOs is also needed. Significant progress has been made in the past year including revised policies led by CREL that articulate the role of communities and the sharing of benefits for protected forest areas; development and approval of protected area plans to provide a foundation for CMO strategies; CMC and CBO capacity building and successful leadership changes resulting in better CMO planning; and more successful CMO resource mobilization efforts that includes a mixture of government, bi-lateral projects (including CREL) and local resources. This will be enhanced by means of a focused effort on supportive wetland and forest co-management policies, long term CMO planning, linking CMOs to a diversity of resource opportunities and further leadership development.

Approval of TPPs and government mandated engagement with CREL

In late 2015, the FD and DoE TPPs were approved by the GoB. Immediately after approvals, CREL worked closely with both departments to prepare Annual Development Plans (ADPs) covering both, the donor and the GoB contributions. In parallel, the FD and DoE worked together in getting the CD/VAT amounts released for procurement of the vehicles that USAID had approved for the two departments. With all approved TPPs in place, CREL started providing monthly financial progress reports, procurement plans and complied with other reporting requirements of the GoB. Specific project activities and resource commitments are specified in each of the three TPPs and have been incorporated into the final draft 18-month plan for CREL which has been provided to USAID and was approved for October 2015 to September 2016 (Year 4).

Search for non-extractive livelihoods

Financially and socially attractive alternative livelihoods and viable resource substitution options are critical to the successful conservation of protected areas and the natural resources within them. Policy alone will not fully address the unsustainable extraction of natural resources in protected areas. Many community members are currently dependent upon the extraction of these resources for both income and daily use, often at unsustainable levels. This will only change when there are alternative options which are more financially attractive than the returns on the extraction of natural resources. Alternatives also must be appropriate for the specific target group of resource extractors, particularly women. Ensuring that alternative livelihoods options are also “climate resilient” is another layer of complexity. Women’s opportunities are particularly limited in scope due to restrictions on travel, inequitable access to information and other inputs and unbalanced participation in decision making at household and other community levels. All of these result in a slower than anticipated reduction in natural resources extraction.

Environmental Compliance Processes

Construction activities associated with CMO plans that support increased opportunities for income generation from tourism and improved ecosystem functioning (wetland, forest, riverine and marine habitat improvements) were hindered by the complexity of the environmental mitigation documentation and approval processes. This has now been largely addressed by means of a revised EMMP and agreed upon processes.

Operations

In this year, CREL established formal site offices and started full-scale implementation of activities in Tengragiri, Nijhum Dwip, Baroiadhala, Hazarikhil, and Ratargul, which involved engaging and coordinating with the relevant government and community stakeholders, deploying project staff, procurement of the required equipment and developing activity schedules. In some of these sites, CREL helped establish new CMOs, VCFs and PFs, and conducted CMO sustainability/scorecard assessments.

Specific emphasis was given to construction works that are related to biophysical improvements (wetland dredging) and eco-tourism facilities development in all forest PAs where CREL works. The third round of construction works proposals, primarily aimed to build facilities for tourists in the forest PAs and wetlands, was initiated this year. This is expected to increase the number of tourists and generate entry fees for the CMOs. The response from the CMOs has been enormous. All engineering designs for the third round works are nearly completed and the engineering team will start sharing those with the concerned CMOs and FD representatives in early Year 5. The bidding process and awarding contracts will commence and be completed during the Q1 of Year 5.

The security issue that arose in early July 2016 caused some delays in project implementation. All expatriates, local CCNs and consultants of CREL were safe and sound, however scheduled home office and technical visits were cancelled and movements of the Dhaka-based expatriates were highly restricted. Immediately after the sad incident, the CREL office enhanced security measures in all its offices. This included increase in the number of the guards, installation of various security devices and checking of vehicles and personal belongings of staffs and visitors.

Soon after the approval of the FD and DoE TPPs, two full-time Project Directors (PD) were appointed by the GoB. Both the PDs were apprised of the status of CREL's past and ongoing activities. The first Project Steering Committee meeting of the FD was held in June 2016 at the MoEF chaired by the Secretary, MoEF. Among several decisions taken in the meeting, the long-term sustainability of the CMOs received emphasis.

One big major achievement of CREL in this period was the procurement of vehicles for the FD and DoE. The TPPs for FD and DoE were approved in late 2015 and the both departments received the CD/VAT amounts from the GoB for the vehicles in late June 2016 the disbursement of which was purely time bound i.e. June 30, 2016. Consequently, CREL had to place orders for 13 vehicles (11 for the FD and 2 for the DoE) in July 2016. All were delivered and handed over to both the departments in early August 2016.

CREL was able to provide opportunities for visiting USAID staff, training of journalists, biodiversity film contest for youth, photography contest and the COMACON. We also provided support to other projects (Bengal Tiger Conservation Activity (BAGH), Ecosystems Improved for Sustainable Fisheries (ECOFISH), Biodiversity Campaign), other USAID initiatives (USFS, Department of the Interior (DoI)/International Technical (ITAP)) and USAID Mission Units (M&E, Communications). The Accelerating Capacity for Monitoring and Evaluation (ACME)/USAID team conducted and completed its DQA during July-August 2014 and official results of the evaluation are yet to be received. The International Business and Technical Consultants, Inc. (IBTCI)/ACME team initiated the mid-term evaluation of CREL during September 2015. The CREL team provided extensive planning and logistical support to both of these activities.

Personnel

Two major changes in key personnel took place in this year. Kevin Kamp, the former Deputy Chief of Party (DCOP) and this position is now taken over by a local cooperating country national (CCN). The Component 1 Manager was promoted to Sr. Natural Resource Policy Specialist position as it became vacant. In addition, two junior-level CCNs were recruited to work with the CREL Component 3 team and the Grants team. The Manager, Livelihood Program has resigned from his position to pursue an international assignment. Resignations in field-level staff engaged by the CREL partners were relatively limited in this year.

Relations with the Government of Bangladesh

With the TPPs in place significant progress on government coordination was made and Year 4 concluded with working relations at an all-time high. The first meeting of the Project Steering Committee (PSC) of USAID's CREL Project (Forest Part) was held on 22nd June 2016. The meeting was presided over by Dr. Kamal Uddin Ahmed, Secretary of the MoEF and moderated by Md Yunus Ali, CCF. The PSC among others has taken very high level of interest in the sustainability of the CMOs and advised to develop a sustainability plan for the CMOs beyond CREL. Mr. A K M Rafiqul Islam has been nominated as project director (PD) on 22nd June 2016 for CREL (Environment Part).

In addition to the formal TPP government relations, CREL also established a strong relationship with the Ministry of Law and Ministry of Finance which help leverage policy work. The

legislative division of the Ministry of Law is the mandated authority on Government's behalf to vet new laws. The Finance Division of the Ministry of Finance is responsible to endorse the financial matters of any proposed law. The policy stream of the CREL has brought the targeted new rules, e.g. ECA rules and PA rules, to the point of being submitted to the MoEF, the key approval authority. The excellent working relationship established with the government at many levels and CREL has been demonstrated during this year.

Responsibility for land entitlement of wetlands and of swamp patches belongs to Ministry of Land. Leasing of the wetlands and declaring permanent wetland sanctuaries are also the responsibility and mandate of the Ministry of Land. CREL organized a high level MoL visit to the northeast where CREL focus on wetland conservation. Md. Akram Hossain, Additional Secretary, Ministry of Land, Deputy Secretary of the same ministry and CREL focal person Mr. Rashedul Islam participated in the visit to the Baikka beel permanent sanctuary and swamp patches in the Hakaluki haor. The visit sensitized the Additional Secretary to finally agree on the expansion of the Baikka Beel and the Swamp patches sanctuaries.

At the request of the GoB, in December CREL's Senior NRM Policy Adviser attended the 21st UNFCCC Conference of Parties in Paris as part of the official Government of Bangladesh Delegation. During the reporting year CREL supported participation of 17 Government officers to the Climate Change Conference, Asia Pacific Forestry Conference, COP of CITES and a study tour in Thailand. Government Officers included the CCF, DCCF and the Additional Secretary of MoEF among others.

Coordination with other development stakeholders

CREL collaborated closely with USAID's BAGH, ECOFISH and Feed the Future (FtF) projects by sharing technology and information on regional activities and beneficiaries to avoid duplication and leverage USAID's investment. The CreLink M&E data were accessed and used extensively by some of these project. CREL also supported other USG activities including SilvaCarbon (USFS), ecotourism planning (DOI/ITAP) and the Farmer-to-Farmer Program (F2F). CREL worked closely with GIZ, IUCN, UNDP, Women Empowering Agriculture, Relief international, and other organizations.

Financial Summary

[REDACTED]

[REDACTED]

[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]	
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
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Annex A: Progress on Performance Indicators (October 2015 – September 2016)

Indicator	IR	CREL Indicators	Units	Cumulative targets, through PY4	PY4 Target*	PY4 results	Cumulative results, through PY4	PY5 Target*	LOP targets	Remarks
USAID DO4: Responsiveness to Climate Change Improved; and CREL Objective: Increased responsiveness and resilience to climate change in vulnerable biologically diverse environments.										
Ind. 1 (DO4 PPR-1)	DO	F4.8-7: Quantity of greenhouse gas emissions, measured in metric tons of CO2e, reduced or sequestered as a result of USG assistance	tCO2e	915,000	310,000	300,982	911,392	300,000	1,215,000	On-track; FY2017 target and LOP reduced since at Kaptai NP site co-management is no longer functional.
Ind. 2 (DO4 PPR-4)	DO	F4.8.2-26: Number of stakeholders with increased capacity to adapt to the impacts of climate variability and change as a result of USG assistance.	People	55,000 (F-37,500; M-17,500)	30,000 (F-20,000; M-10,000)	34,096 (F-22,020; M-12,076)	77,968 (F-53,613; M-24,355)	2,500 (F-1,700; M - 800)	80,000 (F-55,500; M-24,500)	On track; a limited additional farmers are expected in FY2017
			a) Implementing risk-reducing practices/actions to improve resilience to climate change (Ind 19, c13)	30,000 (F-22,500; M - 7,500)	20,000 (F-14,000; M - 6,000)	16,367 (F-12,126; M - 4,241)	47,910 (F-35,844; M-12,066)	2,500 (F-1,700; M - 800)	50,000 (F-37,500; M-12,500)	Farmers adopted improved farming/ management practices
			b) Using climate information in their decision-making (Ind 8, c4)	25,000 (F-15,000; M-10,000)	10,000 (F-6,000; M-4,000)	17,729 (F-9,894; M-7,835)	30,058 (F-17,769; M-12,289)	0	30,000 (F-18,000; M-12,000)	Village-level CCAM plans and school programs

Indicator	IR	CREL Indicators	Units	Cumulative targets, through PY4	PY4 Target*	PY4 results	Cumulative results, through PY4	PY5 Target*	LOP targets	Remarks
USAID DO4: Responsiveness to Climate Change Improved; and CREL Objective: Increased responsiveness and resilience to climate change in vulnerable biologically diverse environments.										
	IR 1: Improved Governance of Natural Resources and Biodiversity									
Ind. 3 (DO4 PPR-5)	IR1	F4.8.2-28: Number of laws, policies, officially proposed, adopted, or implemented	Nos. of policies	13 (officially proposed stage)	4	3	12	1	13 (officially proposed stage)	One policy (P14) no longer feasible and hence LOP target be 13. Two policies officially proposed to MoFL, one adopted by the Government and one sub-national policy initiated implementation
			Drafted	13	1 (P13)	-	12	1 (P13)	13	
			Submitted	13	2 (P3, P13)	-	12	1 (P13)	13	
			Officially Proposed	13	4 (P2, P3, P5, P13)	3 (P2, P3, P5)	12	1 (P13)	13	
			Adopted	12	8 (P1, 2, 3, 5, 6, 8, 10, 11,)		4 (P4, P7, P9, P12)	9 (P1, 2, 3, 5, 6, 8, 10, 11, 13)	13	
Implemented	7	7	1 (P12)	2 (P9, P12)	11 (P1, 2, 3, 4,5, 6, 7, 8, 10, 11, 13)	13				
SIR 1.1 Strengthened Legal and Policy Framework for Co-Management										
Ind. 4	SIR 1.1	C1: Number of legally defined public land units assigned long-term for co-management.	Land units	36	8	0	10	26	36 (LOP target revised).	Large number of others requested and pending decisions from MoL, however less likely to achieve and hence LOP target reduced to 36
SIR 1.2 Increased Demand for better NRM										
Ind. 5	SIR 1.2	C2: Number of requests raised by institutions to higher governance tiers for better NRM.	# requests/	170	80	96	302	0	270	LOP target achieved
			# institutions	60	30	22	91	0	90	

Indicator	IR	CREL Indicators	Units	Cumulative targets, through PY4	PY4 Target*	PY4 results	Cumulative results, through PY4	PY5 Target*	LOP targets	Remarks
USAID DO4: Responsiveness to Climate Change Improved; and CREL Objective: Increased responsiveness and resilience to climate change in vulnerable biologically diverse environments.										
Ind. 6 (DO4 PPR-6)		F4.8.1-29: Number of person hours of training in natural resources management and/or biodiversity conservation supported by USG assistance	Person-hours	47,000	9,000 (F-2,250; M-6,750)	29,152 (F-10,734; M-18,418)	103, 879 (F-40,627; M-63,251)	0	50,400; (F-12,600; M-37,800)	LOP target Overachieved;
IR 2: Enhanced Capacity of Key Stakeholders										
Ind. 7	IR 2	C3: Number of training modules and curricula developed to promote co-management and climate resilience	No. of curriculum changes adopted by target institutions (Target in parenthesis achieved once the course begins)	5 (3)	2 (3)	1(0)	3(1)	2 (4)	5 (curricula-institution combinations)	3 Universities agreed to modify curricula including modules/ materials from CREL and one initiated the course.
Ind. 8	IR 2	C4: Number of stakeholders using climate information in their decision making	People	25,000 (F-15,000; M-10,000)	10,000 (F-6,000; M-4,000)	17,729 (F-9,894; M-7,835)	30,058 (F-17,769; M-12,289)	0	30,000 (F-18,000; M-12,000)	LOP target achieved
SIR 2.2 Strengthened Organizational Capacity of NRM Institutions										
Ind. 9	SIR 2.1	F.4.8.2-14/C5: Number of institutions	Nos. of institutions	60	30	28	55	25	80	On track; institutions include CMOs/CBOs /LGIs

Indicator	IR	CREL Indicators	Units	Cumulative targets, through PY4	PY4 Target*	PY4 results	Cumulative results, through PY4	PY5 Target*	LOP targets	Remarks
USAID DO4: Responsiveness to Climate Change Improved; and CREL Objective: Increased responsiveness and resilience to climate change in vulnerable biologically diverse environments.										
		with improved capacity to address climate change issues.								
Ind. 10	SIR2.1	C6: Number of co-management units with improved performance.	Nos. of CMOs	35	20	16	30	10	40 (inherited CMOs and those established by CREL)	LOP target revised, since 2 CMCs dropped, 44 being assessed and a few newer ones may take longer support to attain criteria set for improvement.
SIR 2.1 Improved Knowledge and Skills of NRM stakeholders										
Ind. 11	SIR 2.2	C7: Number of person hours of training to build resilience to climate change.	Person-hours	210,000 (F-150,000; M – 60,500)	50,000 (F-40,000; M-10,000)	56,069 (F-41,812; M-14,256)	246,396 (F-171,726; M-74,671)	0	210,000 (F-150,000; M – 60,500)	LOP target overachieved.
IR 3: Strengthened Implementation of Climate Resilient NRM										
Ind. 12 (DO4 PPR-3)	IR 3	F4.8.1-26: Number of hectares (ha.) of biological significance and/or natural resources under improved	a) BS area inherited (ha)	700,000	700,000	703,277	703,277	700,000	700,000	BS area (inherited) changed with loss of Kaptai NP and revision in Sundarbans ECA area
			b) Other NR area inherited (ha)	140,000	140,000	140,587	140,587	140,000	140,000	Landscape areas; (i.e. CMOs' zone of influence), actual area

Indicator	IR	CREL Indicators	Units	Cumulative targets, through PY4	PY4 Target*	PY4 results	Cumulative results, through PY4	PY5 Target*	LOP targets	Remarks
USAID DO4: Responsiveness to Climate Change Improved; and CREL Objective: Increased responsiveness and resilience to climate change in vulnerable biologically diverse environments.										
		NRM as a result of USG assistance.								involved with co-management.
			c) New BS area added (ha)	42,000	42,000	60,463	60,463	60,000	60,000	New sites in CREL
			d) New other NR areas added (ha)	45,000	45,000	46,337	46,337	45,000	45,000	Actual area of landscapes involved in co-management.
Ind. 13	IR 3	C8: Number of hectares (ha.) of biological significance and/or natural resources showing improved biophysical condition as a result of USG assistance.	a) BS area with direct interventions(ha)	960	215	643	967	0	960	LOP target achieved
			b) Other NR areas with direct interventions (ha)	380	27	84	618	0	380	Overachieved
			c) BS areas under co-management (ha)	na	na	na	na	na	Baseline developed for all co-managed sites	Baselines only; land cover mapping, forest inventory, fish catch and bird survey continues.
			d) wider NR areas under co-management (ha)	na	na	na	na	na	Measure, no target	
SIR 3.1 Increased sustainable financing of CMOs										
Ind. 14	SIR 3.1	C9: Funding leveraged from public and private sources contributing to improved natural	USD	\$5 million	\$5.00 million	\$ 1.62 million	\$ 5.31 million	\$ 2.00 million	\$7 million	LOP target reduced substantially based on feasibility and recommendation of mid-term evaluation

Indicator	IR	CREL Indicators	Units	Cumulative targets, through PY4	PY4 Target*	PY4 results	Cumulative results, through PY4	PY5 Target*	LOP targets	Remarks
USAID DO4: Responsiveness to Climate Change Improved; and CREL Objective: Increased responsiveness and resilience to climate change in vulnerable biologically diverse environments.										
		resource management.								
Ind. 15	IR 3.1	C10: Number of co-management organizations realizing improved revenue collection and/or sharing.	Nos. of CMOs	15	5	-	1	14	15	Preparatory work for several other CMOs are underway but requires number of steps including facility development; other changes are tied in with policy changes under the PA rules.
SIR 3.2 Improved Planning for Climate Resilient NRM										
Ind. 16	SIR 3.2	C11: Number of villages implementing actions to sustain and/or enhance resilience of their NR base.	Nos. of inherited villages	870	870	870	829	0	830	LOP target reduced, since at Kaptai site co-management is not now functional.
			new villages	120	120		135	0	135	Few more may be added in PY5
IR 4: Improved Livelihoods that are Environmentally Sustainable and Resilient to Climate Change										
Ind. 17 (DO4 PPR-2)	IR 4	F4.8.1-6: Number of people with increased economic benefits derived from sustainable NRM and conservation	People	325,000 (F – 162,500; M –162,500)	125,000 (F 62,500; M 62,500)	148,420 (F 72,726, M 75,694)	327,698 (F 160,572, M 167,126)	25,000 (F – 12,500; M –12,500)	350,000 (F – 175,000; M – 175,000)	LOP target revised based on feasibility and recommendation of mid-term evaluation

Indicator	IR	CREL Indicators	Units	Cumulative targets, through PY4	PY4 Target*	PY4 results	Cumulative results, through PY4	PY5 Target*	LOP targets	Remarks
USAID DO4: Responsiveness to Climate Change Improved; and CREL Objective: Increased responsiveness and resilience to climate change in vulnerable biologically diverse environments.										
		as a result of USG assistance.								
SIR 4.1 Increased investment in eco-friendly enterprise										
Ind. 18 (Custom-output: SIR 4.1.2) (DO4 PPR-7)	SIR 4.1	C12: Additional market revenue generated from protected areas and landscapes as a result of USG assistance.	USD	\$ 2.61 mill	\$ 1.475 mill	\$ 6.073 mill	\$ 10.05 mill	0	\$ 4.54 mill	LOP target achieved in FY2016
		Disaggregation of this indicator:								
		Additional net household income from value chain activities.	USD	\$ 1.825 mill	\$1.175 mill	\$ 1.725 mill	\$ 3.408 mill	0	\$ 3.300 mill	
		Additional value of wetland products – mainly.	USD	\$0.650 mill	\$0.25 mill	\$ 4.161 mill	\$ 5.956 mill	0	\$ 1.010 mill	
		Additional income to tourism enterprises								Once impact study conducted in winter/2017
		Visitor fees (Total)	USD	\$ 0.130 mill	\$ 0.05 mill	\$ 0.187 mill	\$ 0.687 mill	0	\$ 0.230 mill	
SIR 4.2 Increased adoption of environmentally sustainable climate resilient livelihoods										

Indicator	IR	CREL Indicators	Units	Cumulative targets, through PY4	PY4 Target*	PY4 results	Cumulative results, through PY4	PY5 Target*	LOP targets	Remarks
USAID DO4: Responsiveness to Climate Change Improved; and CREL Objective: Increased responsiveness and resilience to climate change in vulnerable biologically diverse environments.										
Ind. 19	SIR 4.2	C13: Number of farmers and others who have applied improved technologies or management practices.	Nos. of farmers	30,000 (F-22,500; M - 7,500)	20,000 (F-14,000; M - 6,000)	16,367 (F-12,126; M - 4,241)	47,910 (F-35,844; M-12,066)	2,500 (F-1,700; M - 800)	50,000 (F-37,500; F-12,500)	On-track; a small segment of farmers will be reviewed who entered into production in Y4

Annex B: Success Stories



**Abdul Gafur Hawladar with his
mangrove nursery**

New Trees and a Protected Future: Green Army Restores Sundarbans Mangroves

Many villages in Koyra Upazila, Khulna district, in southwestern Bangladesh, are adjacent to the Sundarbans which are prone to cyclones. In 2009, Cyclone Aila caused major damage, washing away almost everything in the area. Trees were destroyed and embankments eroded due to the accompanying storm surge rendering farmland soils saline. As a result, people were unable to grow crops on this land, increasing the necessity for extraction of natural resources from the Sundarbans.

Mr. Abdul Gafur Hawladar, a youthful 70-year-old, is a social worker and active in the Koyra Purbapara village conservation forum (VCF), one of the grassroots organizations that contributes to the work of the local co-management committee (CMC). Working for Sundarbans conservation for many years, he has been engaged with USAID since 2013. Through USAID's Climate-Resilient Ecosystems and Livelihoods (CREL) Project, Gafur received training on tree nursery management, organic fertilizer production, climate change adaptation and mitigation strategies, natural resources management and training on high value horticulture crop cultivation. Because of his demonstrated interest in mangrove protection, he was encouraged to establish a mangrove nursery by his fellow VCF members. Gafur selected four members from the VCF who were poor and highly dependent on forest resources to form his 'green army' for the protection and conservation of mangroves.

USAID provided assistance to establish a mangrove nursery on one hectare of land that has produced and sold 7,000 mangrove tree seedlings earning BDT 70,000. A portion of the earnings went to the CMC and VCF to support homestead tree plantations for 50 households. Gafur and his green army then established a second mangrove nursery increasing the production to more than 40,000 seedlings. The nurseries are creating habitats for birds, bees are making honeycomb in the trees and the area has become a breeding ground for various aquatic species including crab, shrimp, eel and fish. When planted and mature, these trees will serve as an important wind barrier and protection from cyclonic storm surges.

Gafur said, "we not only earn our livelihoods from the nursery, but we also encourage people to plant mangrove species around the embankments because it reduces erosion and acts as a storm surge barrier." He explained that before the mangrove nursery, very few people understood the importance of planting trees. Now they know about the importance of mangroves for storm protection and that planting trees can contribute to their livelihoods and sustainably increase aquatic natural resources in the Sundarbans.

Policy Approval Success: Ecologically Critical Areas Rule 2016



Policy-Maker Dialog in Cox's Bazar

The formal approval of the Ecological Critical Areas Rules 2016 on 22 September 2016 is the result of a two-decade effort by the Government of Bangladesh, concerned environmentalists and USAID to provide a legal framework for the conservation of natural landscapes of ecological importance. Clarifying the Environmental Conservation Act 1995, the ECA Rules 2016 specify roles and modalities for a multi-ministry level ECA national committee, local coordination and decision-making mechanisms to conserve and reduced threats for a mixture of critical “hotspot” land and wetland ecosystems. A core principle of the ECA Rules is the provision for exclusive rights of local Village Conservation Groups (VCG) through an Upazilla ECA Committee in close cooperation of the Ministry of Land. This is further supported by a sustainable financing arrangement, clear legal clauses and regular monitoring of ecological health and threats.

The decades-long journey to achieve this important policy milestone was made possible by the dedication and efforts of many actors and initiatives as well as overcoming an entrenched history of concurrent, multiple and confusing land and water tenureship. During the period 2008-10 the Department of Environment (DoE) proposed an ECA legal framework to the MoEF. Because progress had stalled for years, in 2013 the MoEF requested CREL to lead the finalization of the ECA Rules. CREL quickly led a capacity assessment of the ECA organizations, revised the ECA Rules, supported a stakeholder meeting that included MoEF, CREL partners, the UNDP-Community Based Adaptation Project and various experts and pushed for a final legal review by the Ministry of Law, Justice and Parliamentary Affairs. CREL organized strategic consultations, ECA site visits and working sessions with the Secretaries of the MoEF and Ministry of Law culminating in a strategic 3-day dialogue and field visit with local ECA stakeholders, VCGs leaders, DoE, Forest Department and the three concerned Ministries. The Law Secretary was compelled to order immediate actions to finalize the ECA Rules. The result is now the approved ECA Rules 2016 that will serve as a basis to strengthen co-management in Bangladesh in support of critical biodiversity hotspots.



Monir Ahmed's Tree Nursery

From Poaching Forests to Planting Trees: A change of heart

Monir Ahmed still hesitates to share stories about his past life when he was involved in illegally poaching Garjan trees from the Shilkhali Garjan Forest in Cox's Bazar, Bangladesh. At that time, Monir struggled to provide for his wife and two children by farming government-owned *khas* land and poaching trees from the forest. Now Monir's is proud to be a protector of the forest he used to destroy.

In 2013, Monir started a new journey with support from USAID's Climate-Resilient Ecosystems and Livelihoods (CREL) Project as a village conservation forum (VCF) member. As a VCF member he learned about the relationship between and the importance of conserving forests, management of natural resources and the growing impacts of climate change. Monir has slowly increased his enthusiasm to protect the Shilkhali Garjan Forest. Based on his growing commitment, CREL recommended him to the Forest Department and was appointed as a member of the Shilkhali Community Patrol Group (CPG) for which he receives a small honorarium.

While helpful, this small honorarium is not sufficient to provide enough for his family or other VCF members involved in forest conservation. CREL addresses this challenge by engaging CPG members in alternative sources of income. After a recommendation from CREL to the Forest Department, Monir received a cow worth 10,000 BDT, has established a tree nursery on a 0.80 hectare plot of land after participating in a nursery management training, he established a 0.15 hectare tree nursery where he grows wood, fruit and medicinal plants. He now has 5,000 trees of different varieties in his nursery and with the income from trees plus money he earns by selling areca nuts from his garden and milk from the cow, he earned more than 200,000 BDT this year.

Monir used to illegally poach Garjan trees to make a living. He could barely earn 10,000 BDT a month and now that he protects rather than cuts trees, his income has almost doubled. Thanks to USAID support, he now advocates within his community to nurture the forest rather than cutting it down.

Aquaculture: A Path to Changing Livelihoods

Since 2011, the Dudpukuria Co-Management Committee in Chittagong District has been working together with the Forest Department to conserve the biodiversity of Dudpukuria-Dhopachari Wildlife Sanctuary. Together they have created community awareness of the importance of forest ecosystems and provided support for alternative livelihoods for VCF members who are dependent on forest resources for their livelihoods. Until recently, progress has been slow due to a lack of funds. But in 2015 USAID's Climate-Resilient Ecosystems and Livelihoods (CREL) Project provided support for Dudpukuria CMC efforts after providing financial management training to them followed by an initial small grant. They demonstrated their fiscal management capacity and commitment to conservation with these funds.



Abdur Razzak Feeding His Fish

Based on their initial success, the Dudpukuria CMC requested and received another grant to help support alternative livelihoods for forest dependent VCF and CPG members as part of their strategy to conserve biodiversity in the wildlife sanctuary. The CMC has helped create an alternative financial path for 51 Community Patrol Group (CPG) and 68 Village Conservation Forum (VCF) members from Dudpukuria, Barsonkhola and Kalichari villages through aquaculture. These 119 people received a loan of 82,000 BDT from the CMC to cultivate fish in 5 ponds comprising 4.90 acres, for which they completed the required pond preparations including repairing pond embankments and ensuring appropriate pond depth. They stocked these ponds with 160,000 monosex tilapia and 250 kg of carp fingerlings. They are making significant progress.

“Fish are like as my son.... I feed them and gradually they grow in front of me” commented Abdur Razzak, a 28-year-old representative of the CPG from Dudpukuria Village. Mr. Razzak, like 968 village conservation forum (VCF) members of Dudpukuria Co-Management Committee (CMC), depends on the forest for items such as firewood and other resources he sells or uses at home. He learned of the importance of forest biodiversity in a VCF meeting and joined the local CPG to conserve the forest. After joining, he and other CPG members are trying to reduce their own dependency on the forest and requested the CMC to give them an opportunity to change their lives.

With the second grant, the CMC has established a revolving fund to ensure they can support all VCF and CPG groups over time which will help others reduced their destructive dependency on forest resources. Together with Mr. Razzak, those involved in aquaculture expect to earn 1.5 million BDT this year from their fish. Md. Abu Jafor, President of Dudpukuria CMC said, “We are working for forest conservation and engaging resource dependent people in alternative livelihoods opportunities. We hope these grants will help us create a path for people to reduce forest dependency.”



Md. Waliar Rahman, Chadpai CMC

Change from Inside

Local government in Bangladesh plays a critical role in addressing environmental and climate issues in local communities. Therefore, USAID's CREL project supports efforts by CMOs to incorporate these issues into Union Parishad budgets. This works particularly well when CMC leaders hold position of influence in the Union Parishad. This is what happened in Chila Union of Chadpai Upazila where 425,000 BDT was allocated to support the Chadpai CMC plans that included tree plantations, pond re-excavation and raising rural roads and other strategic areas to address adverse climate events. In addition, 2,535,975 BDT was also

allocated to distribute solar panels to the very poor. Mr. Md. Waliar Rahman, an active member of Chadpai CMC and Chairperson of Peoples Forum (PF) took the leading role to motivate the Union Parishad to allocate these climate resilience funds.

Mr. Md. Waliar Rahman always had a special appreciation for the natural beauty of the Sundarbans. But since his childhood he observed people involved in forest destruction including illegal logging, killing of wild animals and using poison to catch fish. He also realized that the economic situation of most of these people was the root cause of their destructive activities, as they were heavily dependent on the Sundarbans for their livelihoods. Climate change induced disasters have made the situation worse including the destruction of transportation facilities and reducing access to fresh water. Although he sought solutions, the situation was becoming worse year by year and his individual efforts on building awareness were not enough to address the massive scale of the problem. With the help of the CMC through a 20% benefit sharing arrangement, he planted 250 tree seedlings in his own backyard. He continued to raise his voice at Village Conservation Forum meetings, PF meetings and any other awareness campaign organized by CMC about the importance of trees, improving transportation facilities and access to safe fresh water for community,

Due to his strong voice on these issues, he became a popular leader in Sundarbans conservation initiatives of the CMC. He realized that if he could be a member of the UP, then he could do even more to find resources to conserve the forest. He competed for and was successful in gaining a leadership position in the 2016 UP election. Within a short period of time since the election, he has successfully motivated local government authorities to support funding to address climate change from the 2016-17 financial year budget. Further, his influence now ensured that Vulnerable Group Feeding (VGF) and Vulnerable Group Development (VGD) cards were issued to forest dependent people. He noted, "For effective conservation of the Sundarbans, CMOs and Union Parishad should always act complementary. Otherwise, the tasks will be incomplete".

Abbreviations & Acronyms

ACF	Assistant Conservator of Forests
ACME	Accelerating Capacity for Monitoring and Evaluation
ADP	Annual Development Plan
ANR	Assisted Natural Regeneration
AOR	Agreement Officer Representative
BACUM	Bangladesh Climate Resilient Ecosystems Curriculum
BAGH	Bengal Tiger Conservation Activity
BBC	Bangladesh Bird Club
BCAS	Bangladesh Center for Advanced Studies
BDT	Bangladesh Taka
BPAT	Bangladesh Public Administration Training Center
CBAECA	Community-based Adaptation in Ecologically Critical Areas
CBO	Community-based Organization
CBT	Community Based Tourism
CC	Climate Change
CCA	Climate Change Adaptation
CCF	Chief Conservator of Forests
CCN	Cooperating Country National
CD	Country Director
CDMP	Comprehensive Disaster Management Program
CMC	Co-Management Committee/Council
CMO	Co-Management Organization
CNRS	Center for Natural Resource Studies
CODEC	Community Development Centre
COMACON	Conference on the Co-Management of Natural Resources
COP	Conference of Parties
CPG	Community Patrol Group
CREL	Climate-Resilient Ecosystems and Livelihoods
CRPARP	Climate Resilient Participatory Afforestation and Reforestation Project
CSA	Climate Smart Agriculture
CSO	Civil Society Organization
DC	Deputy Commissioner
DCOP	Deputy Chief of Party
DCCF	Deputy Chief Conservator of Forests
DFO	District Forest Officer
DMIC	Disaster Management Information Centers
DOAG	Development Objective Agreement
DoE	Department of Environment
DoF	Department of Fisheries
DoI	Department of Interior

DQA	Data Quality Assessment
DU	Dhaka University
DUS	Dweep Unnoyon Sangstha
DRR	Disaster Risk Reduction
ECA	Ecologically Critical Areas
ECOFISH	Ecosystems Improved for Sustainable Fisheries
EMMP	Environmental Monitoring and Management Plan
F2F	Farmer to Farmer (USAID Project)
FAO	Environmental Mitigation and Monitoring Plan
FD	Forest Department
FELC	Financial Entrepreneurship and Literacy Center
FELP	Financial and Entrepreneurial Literacy Program
FIVDB	Friends in Village Development Bangladesh
FtF	Feed the Future
FY	Fiscal Year
GBA	Gender Based Violence
GBV	Gender-based Violence
GFP	Gender Focal Person
GHG	Greenhouse Gas
GIS	Geographic Information Systems
GIZ	German Commission for International Development [Gesellschaft für Internationale Zusammenarbeit]
GO	Government Order
GoB	Government of Bangladesh
GPS	Global Positioning System
GRC	Grants Review Committee
HA	Hectares
HBPS	Hathay Bunano Proshikhan Socirty
IBTC	International Business and Technical Consultants, Inc.
ICS	Improved Cook Stove
IGA	Income Generating Activity
IEE	Initial Environmental Examination
IDLC	Industrial Development Leasing Company
IFAD	International Fund for Agriculture Development
IFPRI	International Food and Policy Research Institute
IPAC	Integrated Protected Area Co-Management
IPCC	Intergovernmental Panel on Climate Change
IPT	Innovative Popular Theatre
IR	Intermediate Result
ITAP	International Technical Assistance Program
IUCN	International Union for the Conservation of Nature
IVR	Interactive Voice Response
JDR3 rd	John D. Rockefeller (Research Grant Program)

LCG	Local Consultative Group
LEAF	Lowering Emissions in Asia's Forest
LGI	Local Government Unit
LOP	Life of Project
LSP	Local Service Provider
LTP	Long Term Plan
M&E	Monitoring and Evaluation
MACH	Management of Aquatic Ecosystems through Community Husbandry
MEO	Mission Environmental Officer
MFF	Mangroves for the Future
MoEF	Ministry of Environment and Forests
MoFL	Ministry of Fisheries and Livestock
MoL	Ministry of Land
MoLJPA	Ministry of Law, Justice and Parliamentary Affairs
MOU	Memorandum of Understanding
NACOM	Nature Conservation Management
NGO	Non-Governmental Organization
NP	National Park
NRM	Natural Resource Management
NSU	North South University
NTFP	Non Timber Forest Product
OCAT	Organizational Capacity Assessment Tool
PA	Protected Area
PCR	Project Completion Report
PCVA	Participatory Climate Vulnerability Assessment
PD	Project Director
PES	Payment for Environmental Services
PF	People's Forum
PIC	Project Implementation Committee
PMEP	Project Monitoring and Evaluation Plan
PGNA	Participatory Gender Need Assessment
RDP	Regional Development Plan
PSC	Project Steering Committee
RECOFTC	Regional Community Forest and Training Centre (Thailand)
REDD+	Reducing Emissions from Deforestation and Degradation and the Enhancements of Carbon Stocks
RFA	Request for Applications
RHC	Retained Heat Cookers
RIMS	Resource Information Management System
RIS	Ramsar Information Sheets
RMO	Resource Management Organization
RO	Regional Office
RUG	Resource User Group

SAU	Sher-e-Bangla Agricultural University
SIR	Sub-Intermediate Result
SDC	Swiss Development Corporation
SDLG	Strengthening Democratic Local Government
SLG	Savings and Loans Group
SNP	Satchari National Park
SOP	Standard Operating Procedures
SoW	Scope of Work
SRCWP	Strengthening Regional Cooperation for Wildlife Protection Project
SRF	Sundarban Reserve Forest
TAC	Technical Advisory Committee
TAPP	Technical Assistance Project Proforma
TNA	Training Needs Assessment
TOCAT	Technical and Organizational Capacity Assessment Tool
SWOT	Strengths, Weaknesses, Opportunities and Threats
TOR	Terms of Reference
ToT	Training of Trainers
TPP	Technical Project Proforma
UCC	<i>Upazila</i> Coordination Committee
UFO	<i>Upazila</i> Fisheries Officer
UFRDC	<i>Upazila</i> Fisheries Resources Conservation and Development Committees
UNDP	United Nations Development Program
UP	Union Parishad
USAID	United States Agency for International Development
USD	United States Dollars
USG	United States Government
VAT	Value Added Tax
VCF	Village Conservation Forum
VCG	Village Conservation Group
WBRP	Wetland Biodiversity Rehabilitation Project
WEAI	Women's Empowerment in Agriculture Index
WI	Winrock International
WLP	Wetlands Leasing Policy
WS	Wildlife Sanctuary